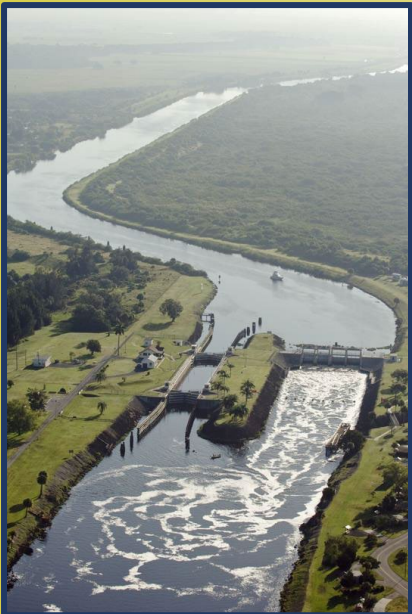


# 2022 Lower West Coast Water Supply Plan Update



2022 LWC Stakeholder Kickoff Meeting  
March 15, 2022



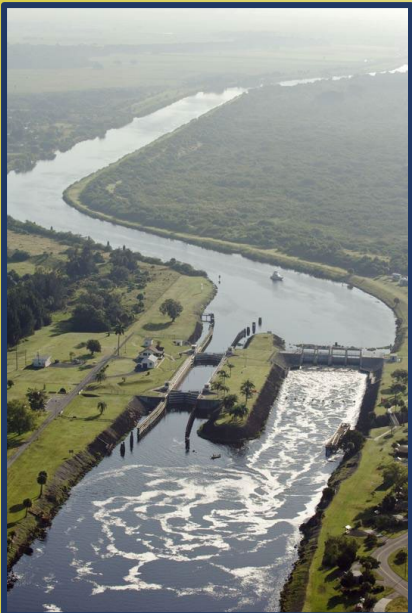
# Agenda

- **Welcome and Opening Remarks** – *Tom Colios, SFWMD*
- **2022 Plan Update Process and Summary of 2017 Plan** – *Tom Colios, SFWMD*
- **Progress Since 2017 and 2022 Goal and Objectives** – *Bob Verrastro, SFWMD*
- **Agriculture Industry Trends in Southwest Florida** – *Gene McAvoy, UF/IFAS*
- **Demand Estimates and Projections** – *Coleen Jordan, SFWMD*
- **Next Steps** – *Bob Verrastro, SFWMD*
- **Adjourn**

*Questions and public comment will occur after each presentation.*



# 2022 Plan Update Process Summary of 2017 Plan



**Tom Colios**

Section Leader, Water Supply Planning

2022 LWC Stakeholder Kickoff Meeting

March 15, 2022





# Statutory Goal of Water Supply Plans (Section 373.709, Florida Statutes)

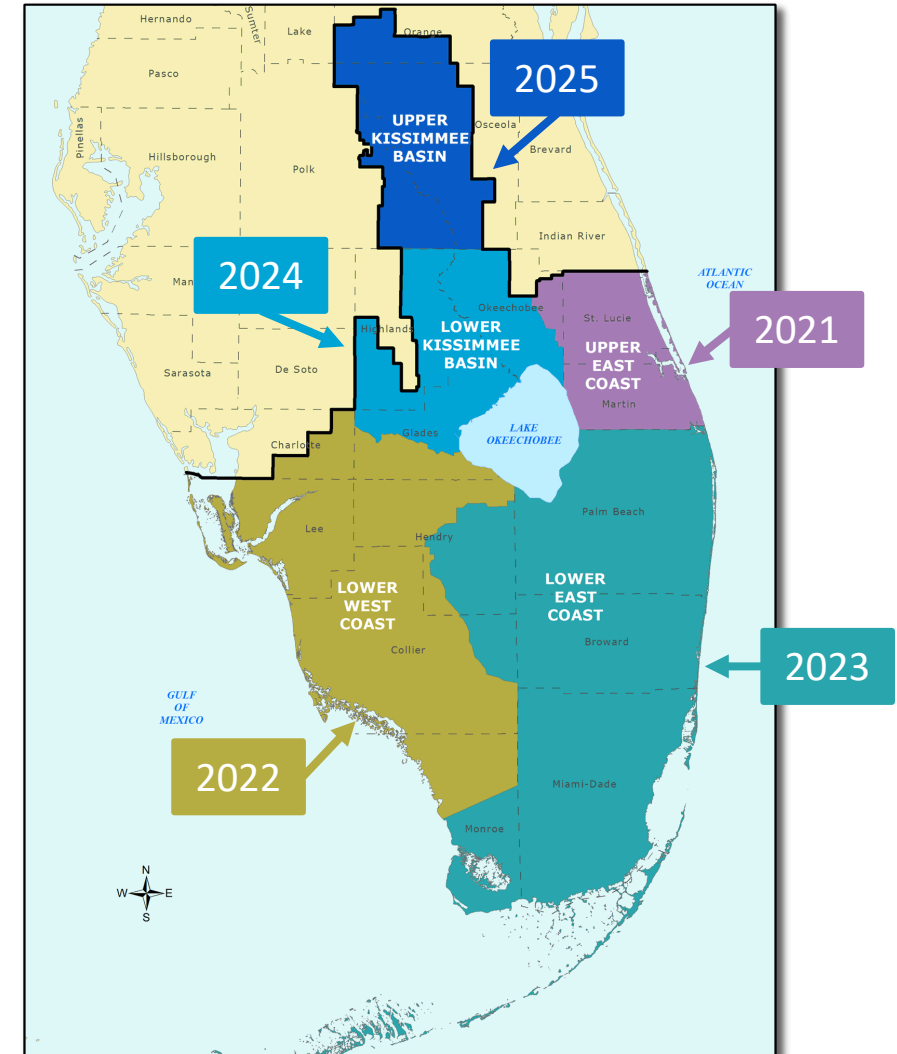
*To identify sufficient water supply sources and future projects to meet existing and future reasonable-beneficial uses during 1-in-10-year drought conditions through **2045** while sustaining water resources and related natural systems.*





# Water Supply Plan Requirements

- 20-year planning period
- Demand estimates and projections
- Resource analyses
- Issue identification
- Evaluation of water source options
- Water resource development
  - Responsibility of water management district
- Water supply development
  - Responsibility of water users
- Environmental protective and restoration strategies
  - Minimum flows and minimum water levels (MFLs)





# Lower West Coast Planning Area

- Includes:
  - Lee County and portions of Collier, Glades, Hendry, Monroe, and Charlotte counties
- Population:
  - 2020 1,188,599
  - 2045 1,617,071\*
- Major agricultural industry
- Significant environmental features

\*University of Florida (UF) Bureau of Economic and Business Research estimate.





# Regional Water Supply Plan

## What It Does

- Provides a road map to meet future water needs while protecting water resources and natural systems
- Conducts a planning-level approach
- Projects future water demands
- Identifies and evaluates water source options

## What It Does NOT Do

- Does not authorize consumptive use permits
- Does not establish MFLs
- Does not adopt rules
- Does not require water users to implement specific projects
- Does not address surface water quality issues (e.g., algal blooms)



# Public Participation

## ➤ Active participation to ensure plan reflects the needs of the planning area

- Agricultural interests
- Public water suppliers
- Environmental community
- County commissions/city councils
- County/city planning staff
- Regional planning council
- Governing Board member involvement
- Southwest Florida Water Management District

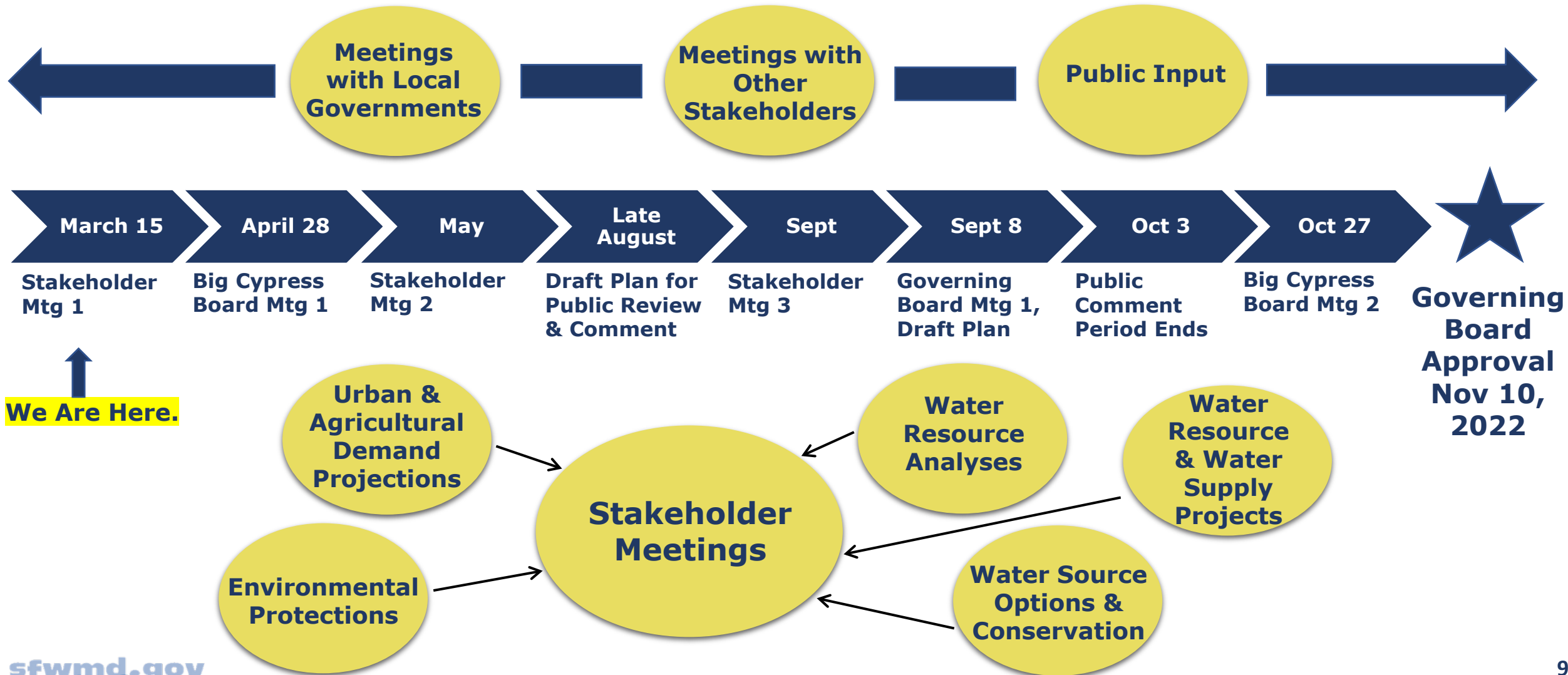
## ➤ Opportunities for public participation

- Stakeholder meetings
- Governing Board meetings
- Big Cypress Basin Board meetings
- One-on-one meetings
- Draft document review and comment





# Water Supply Plan Update Timeline

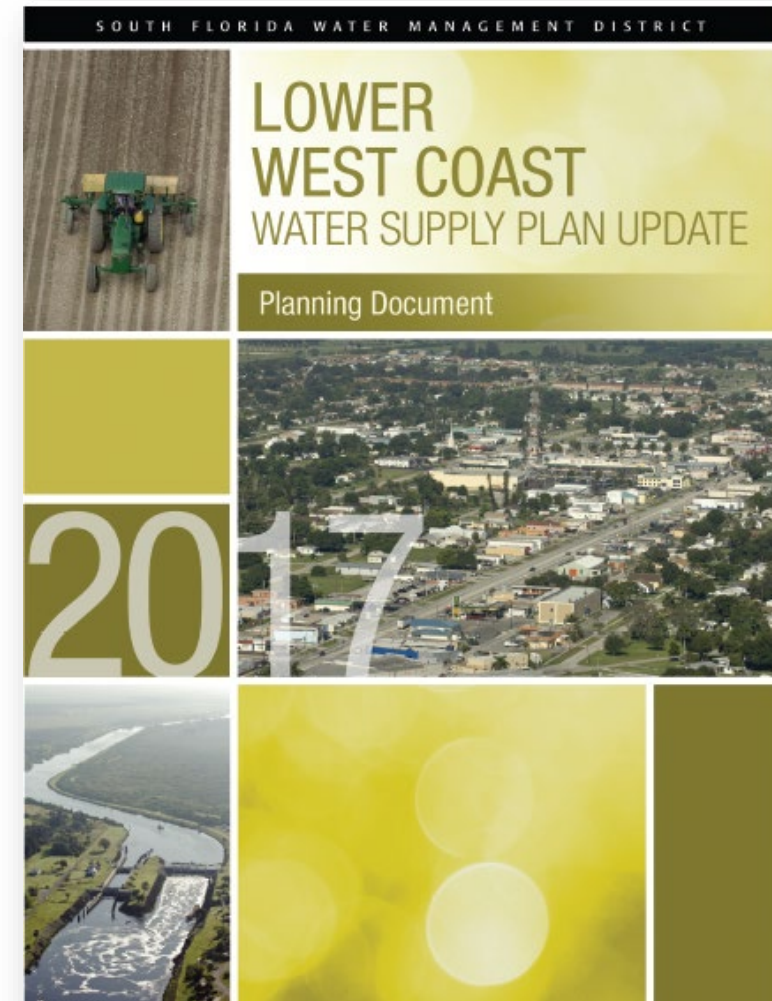


# 2017 Supply Plan Conclusion

The future water demands of the region can continue to be met through the 2040 planning horizon with appropriate management, conservation, and implementation of projects in this 2017 LWC Plan Update.

Dependent on completion of the following:

- Identified Comprehensive Everglades Restoration Plan (CERP) components and other projects to meet environmental needs
- Water supply development projects by 2 utilities





# 2017 Water Supply Issues

- Limited opportunity to increase surficial and intermediate aquifer use
- Surface water availability (storage) is limited
  - Lake Okeechobee Regulation Schedule (LORS 2008)
  - Lake Okeechobee Service Area (LOSA) Restricted Allocation Rule
- Freshwater discharges are affecting the health of coastal resources
- Freshwater sources alone are inadequate to meet water needs
- Long-term sustainability of brackish groundwater sources

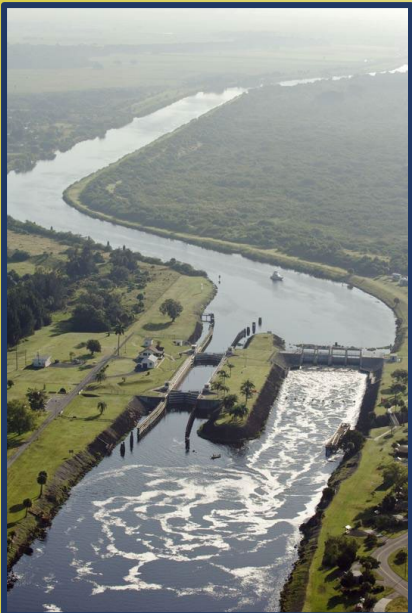
# 2017 Future Direction

- Continue surficial aquifer system (SAS) and Floridan aquifer system (FAS) assessment and monitoring programs
- Construct CERP and related projects
- Promote local storage projects
- Promote water reuse and conservation measures
- Coordinate with other agencies, local governments, and utilities on water supply elements
- Identify the potential impact of sea level rise on utilities and other users



# Progress Since 2017

## 2022 Plan Update Goal and Objectives



**Bob Verrastro, P.G.**

LWC Water Supply Plan Manager

2022 LWC Stakeholder Kickoff Meeting

March 15, 2022





# Herbert Hoover Dike Repair and LOSOM

- Dike repairs anticipated to be completed by 2022
- Lake Okeechobee System Operating Manual (LOSOM)
  - To improve dam safety, in-lake ecology, and water quality; reduce damage to estuaries; and improve water supply performance
  - Undergoing public and agency review
  - Final Record of Decision anticipated by January 2023



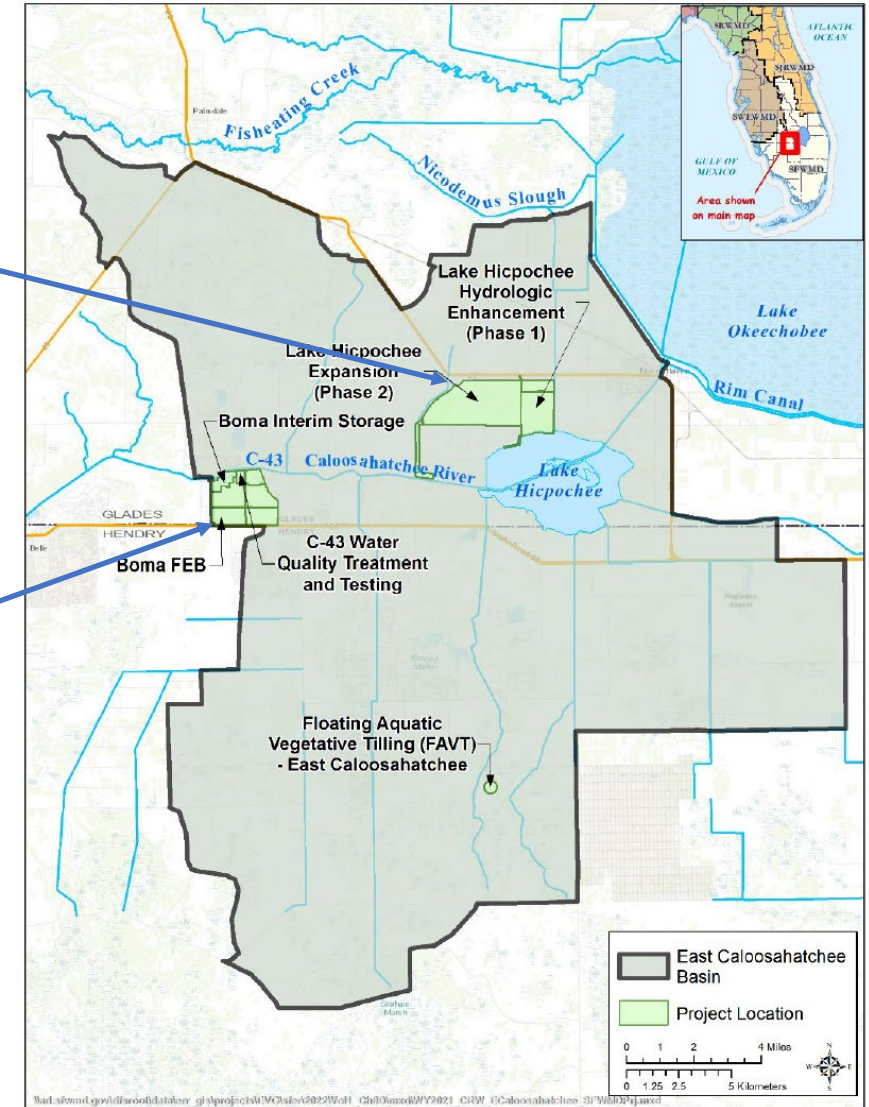
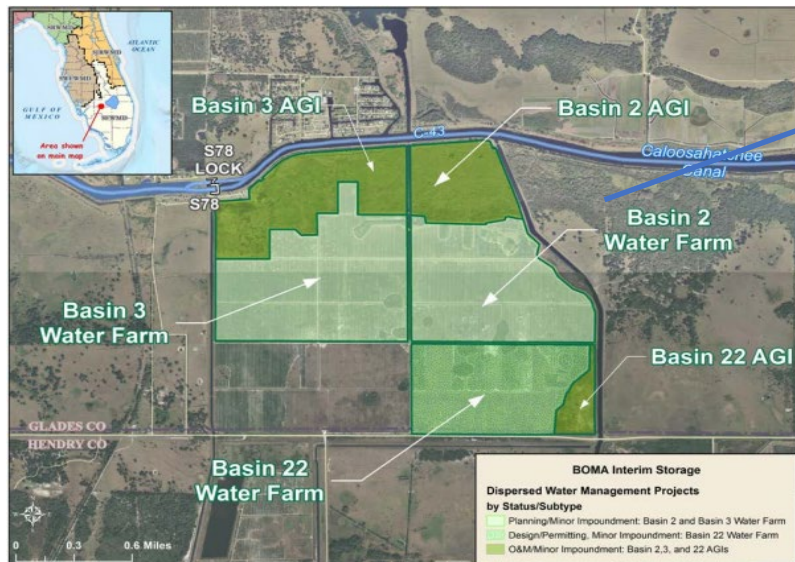


# Water Resource Projects – East Caloosahatchee Basin

Lake  
Hicpochee –  
Hydrologic  
Enhancement



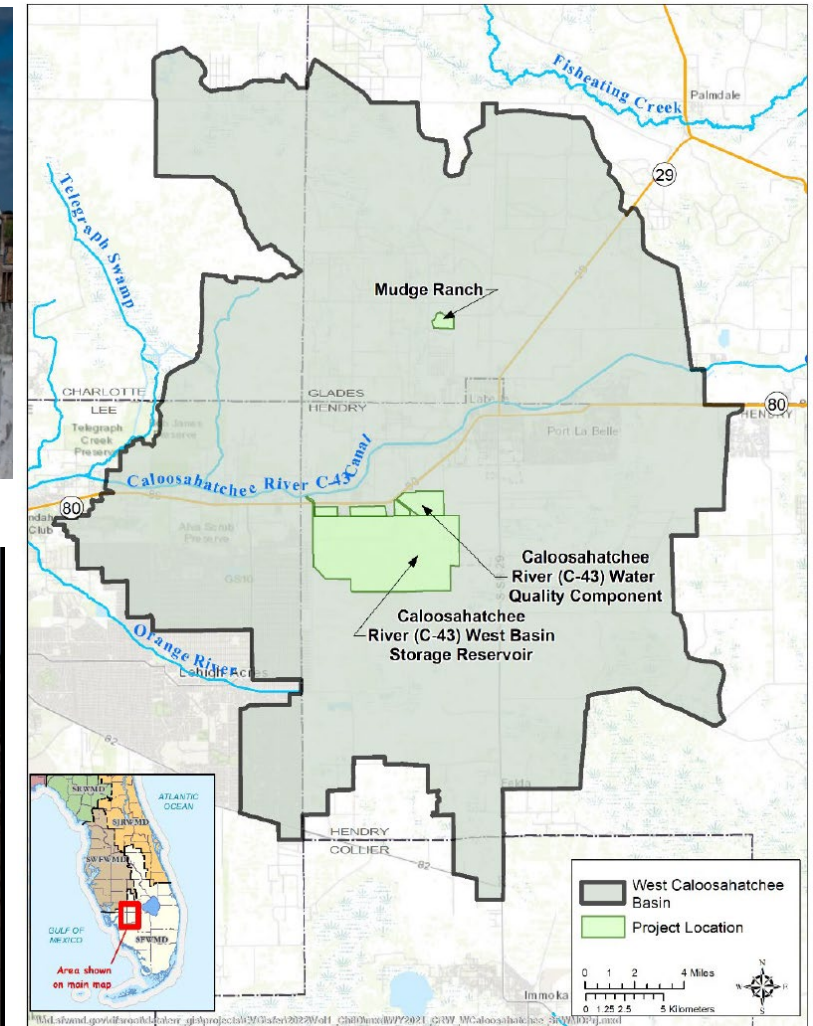
Boma – Water  
Quality  
Treatment and  
Storage





# West Caloosahatchee Basin – C-43 Reservoir

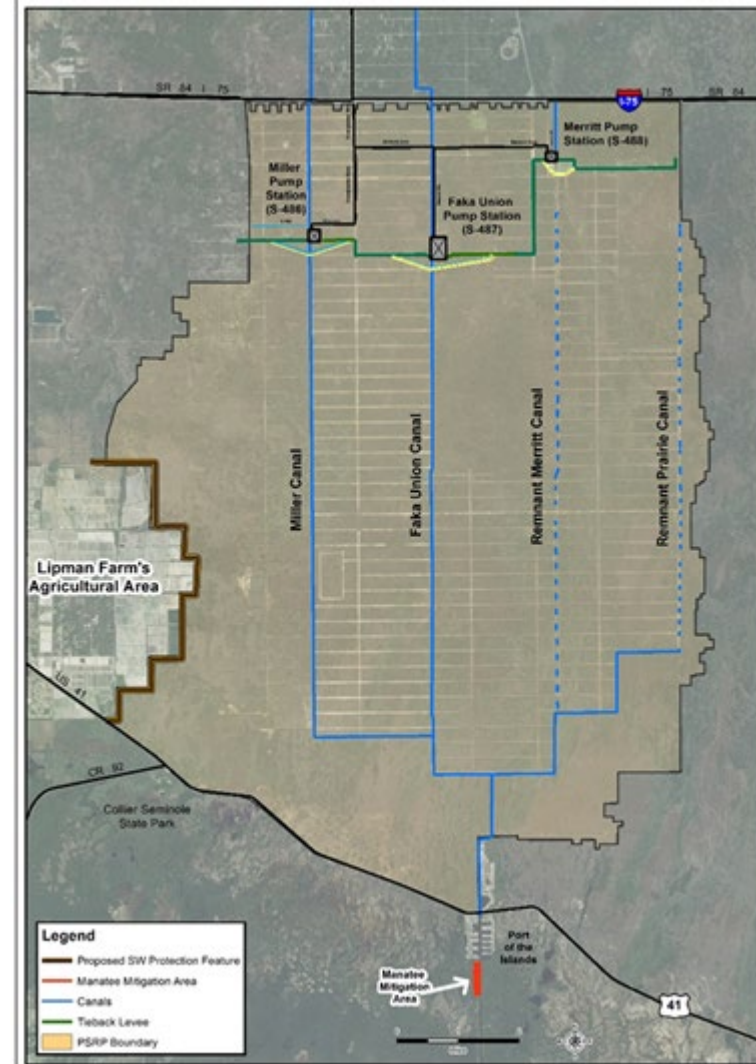
- The C-43 Reservoir is designed to store up to 170,000 acre-feet of water.
- Ecosystem benefits encompasses almost 80,000 acres of riverine and coastal waters.





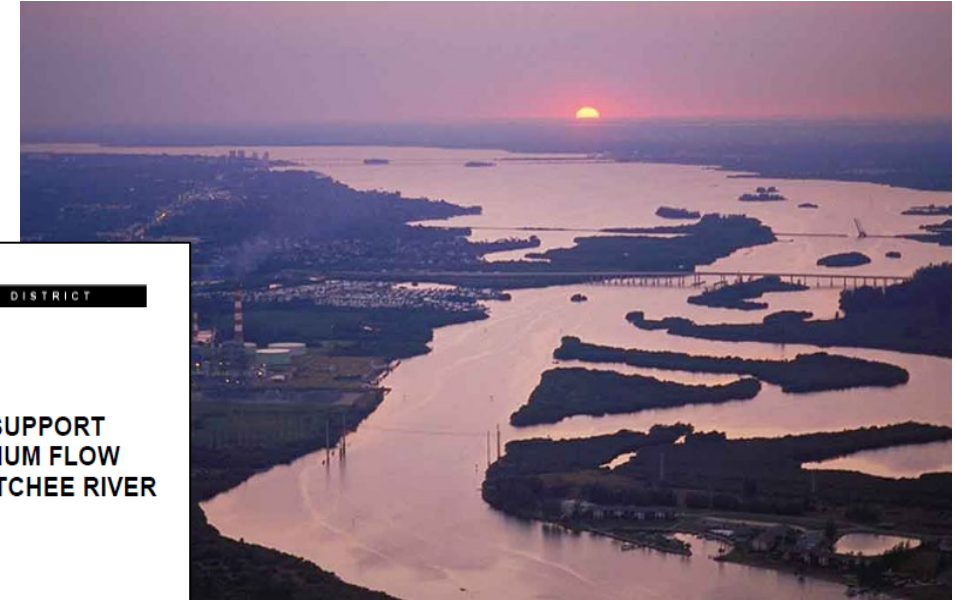
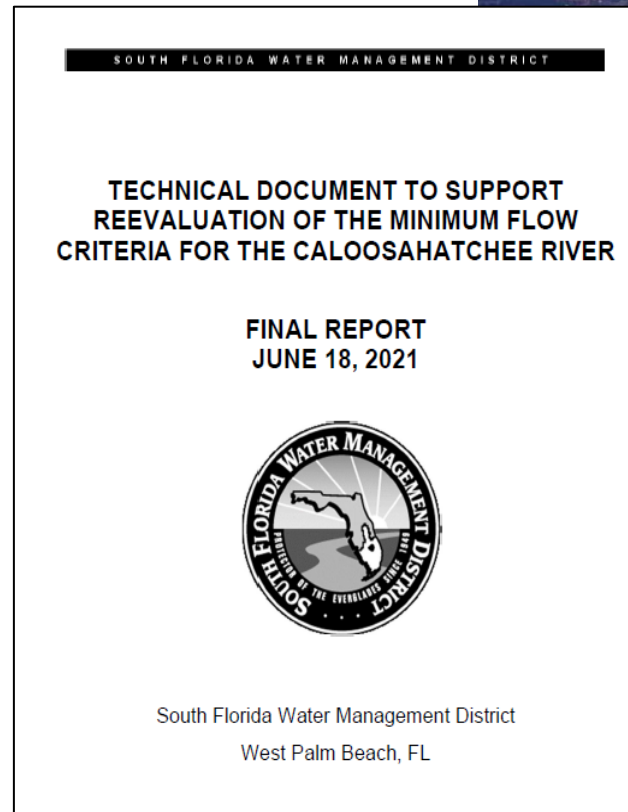
# Picayune Strand Restoration Project

- Picayune Strand Restoration Project will restore 55,000 acres of public lands.
- Most project components have been built.
- Completion of the Southwestern Protection Feature is expected in 2024.
- The Miller Canal will not be plugged until the Southwestern Protection Feature is completed.



# Caloosahatchee River MFL Update

- Minimum flows and minimum water levels (MFLs) revised from 300 to 457 cubic feet per second (cfs) at S-79
- Contingent upon completion of the C-43 Reservoir
- 2019 Amendment to Appendix C of the 2017 LWC Plan Update





# Lake O Aquifer Storage and Recovery Program

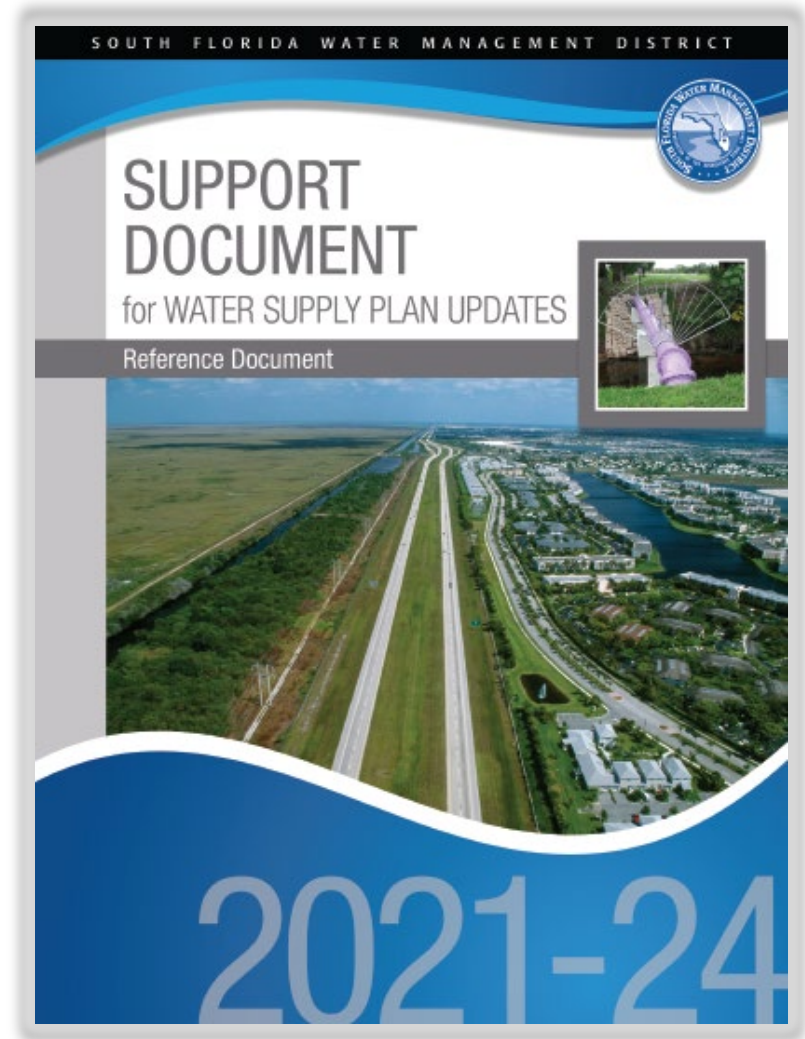
- Component of the Lake Okeechobee Watershed Restoration Plan
- 55 aquifer storage and recovery (ASR) wells
- Accelerated construction program
- Supported by ASR Science Plan





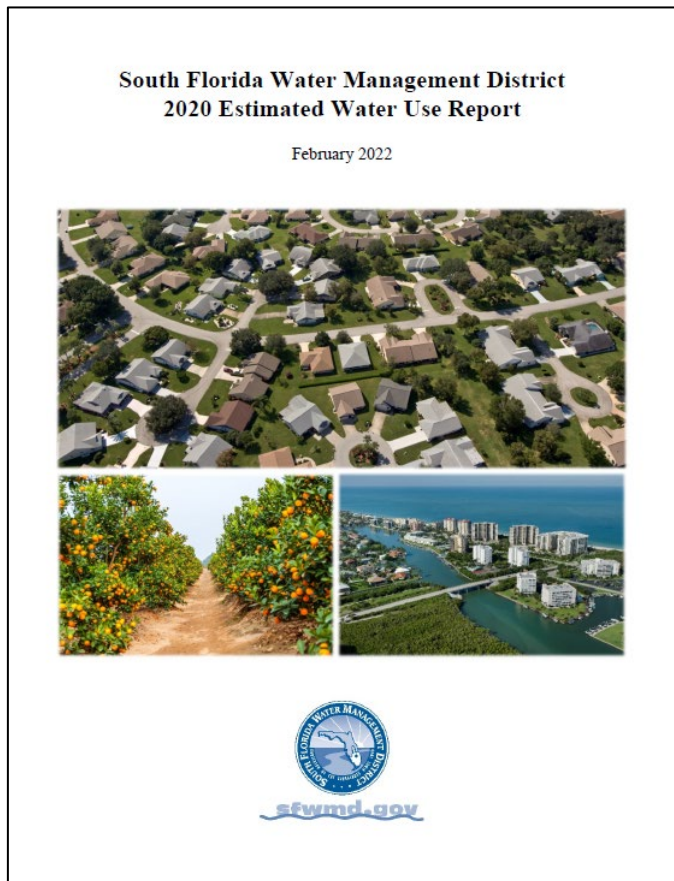
# 2021-2024 Support Document

- Supplements the regional water supply plans
- Legal authority and linkage to local plans
- Comprehensive conservation support
- Water use permitting process/coordination
- Water resource (natural systems) protections
- Ecosystem restoration and District-wide resource development projects
- Water sources options and treatment processes/costs
- Available at [www.sfwmd.gov/lwcplan](http://www.sfwmd.gov/lwcplan)



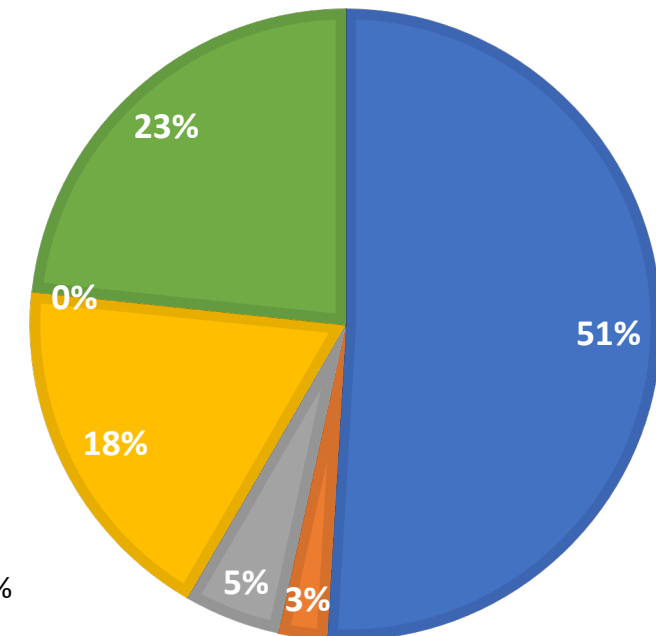
# Water Use Estimation Reports

2020 SFWMD-Wide Total Water Use:  
2.8 billion gallons per day (bgd)



2020 LWC Total Water Use:  
694 million gallons per day (mgd)  
(about 25% of SFWMD total)

■ Agriculture  
■ Commercial/Industrial  
■ Power Generation\*  
■ Domestic Self-Supply  
■ Landscape/Recreation  
■ Public Supply



\* Note: Power  
Generation = 0%

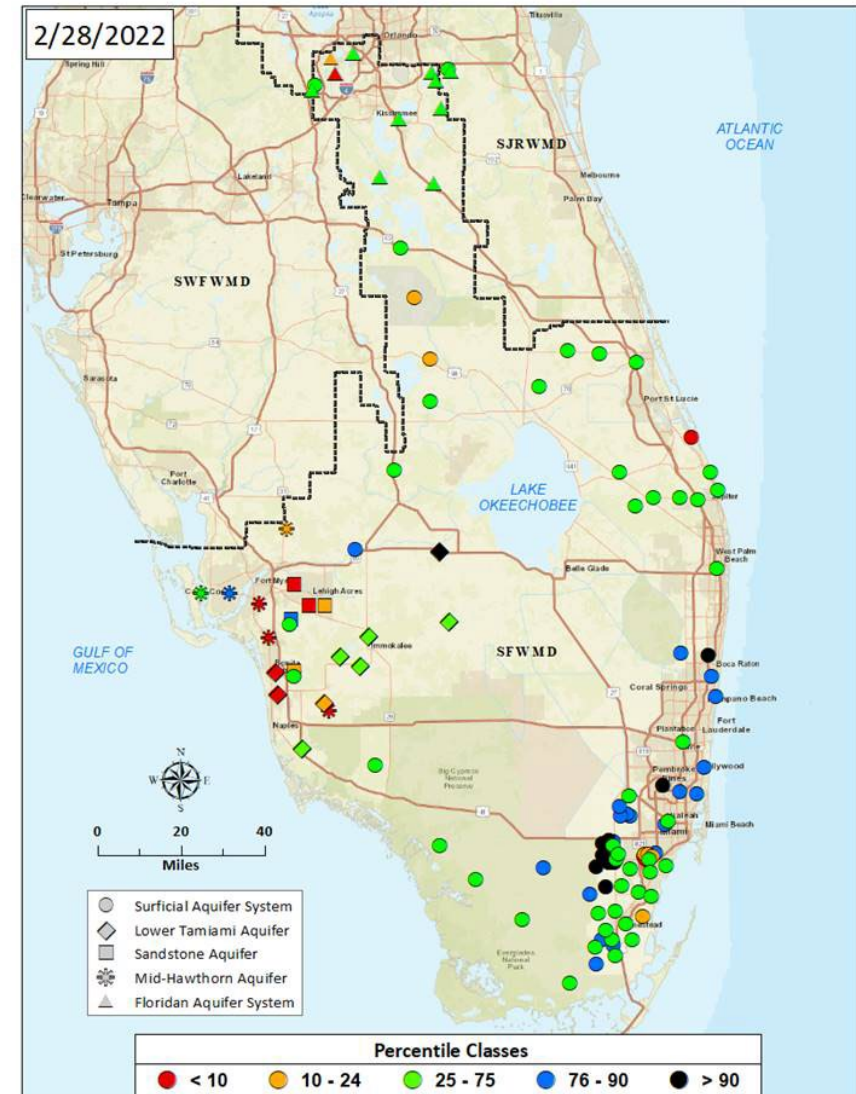
South Florida Water Management District | 3301 Gun Club Road | West Palm Beach, FL 33406

South Florida Water Management District | 3301 Gun Club Road | West Palm Beach, FL 33406



# Groundwater Monitoring

- Weekly assessment
- Focused on LWC shallow and intermediate aquifers
- Intensive growth in domestic self-supply wells
- Localized areas where the maximum developable limit (MDL) is being encroached/ minimum flow and minimum water level (MFL) is being threatened



# Lower West Coast Groundwater Models

2020  
Surficial and  
Intermediate  
Aquifer Model  
(LWCSIM)

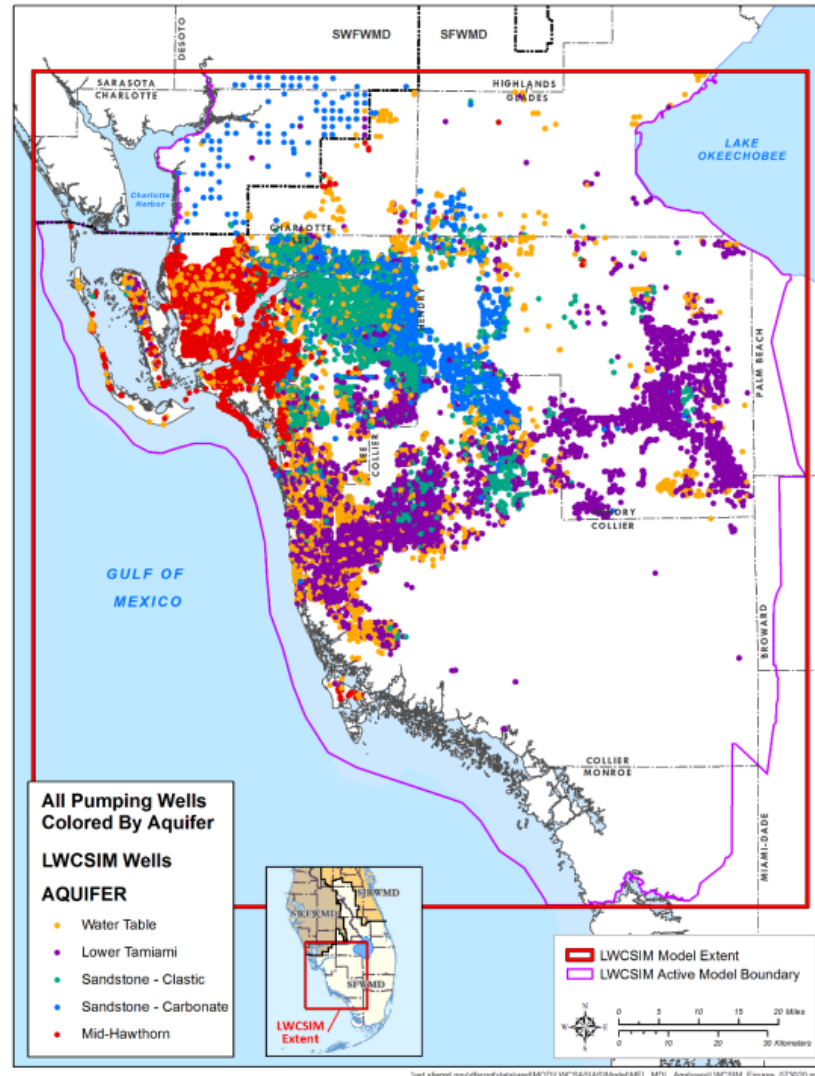


Figure 9. Pumping wells in the model domain, by aquifer.

2020  
West Coast  
Floridan  
Model  
(WCFM)

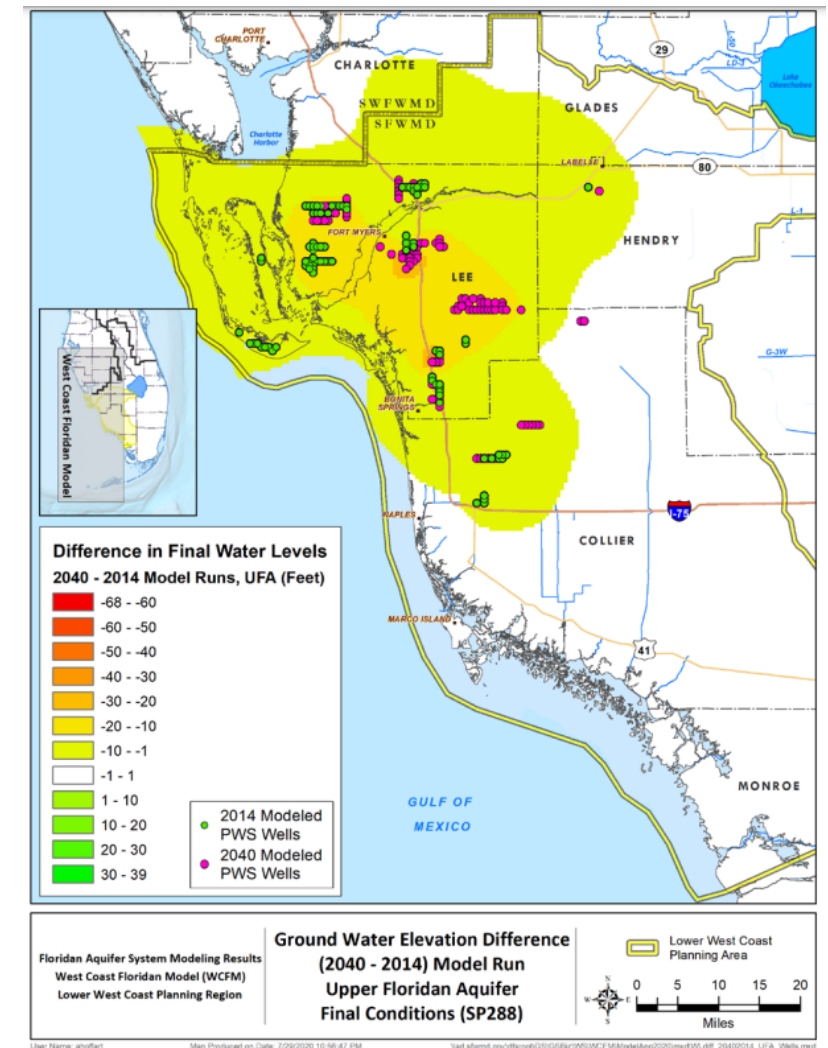


Figure 14. Upper Floridan aquifer water level differences between 2014 and 2040.



# 2019 Saltwater Interface Mapping

## Lower Tamiami



Figure 14. Position of the saltwater interface in the Lower Tamiami aquifer in Lee and Collier counties.

## Sandstone

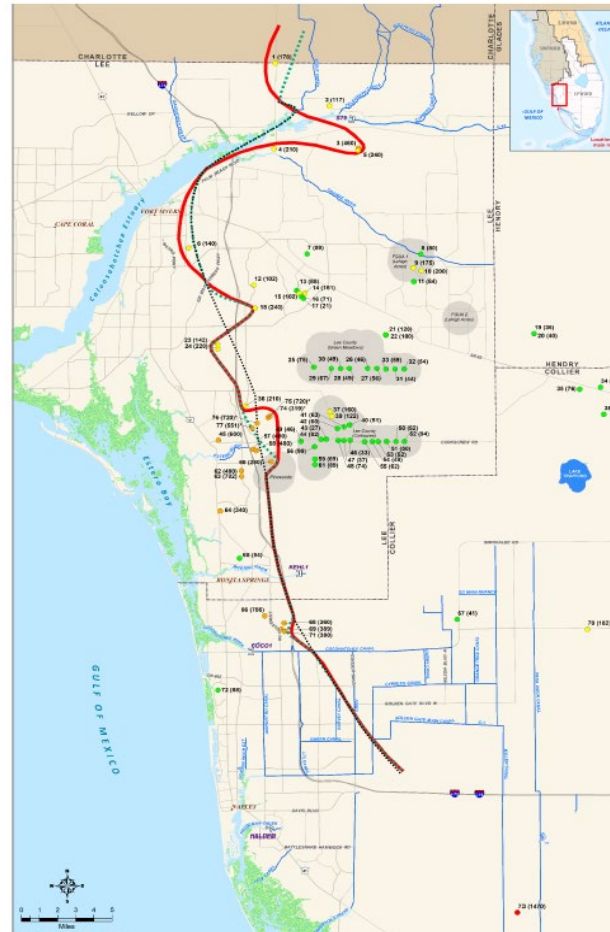


Figure 13. Position of the saltwater interface in the Sandstone aquifer in Lee and Collier counties.

## Mid-Hawthorn

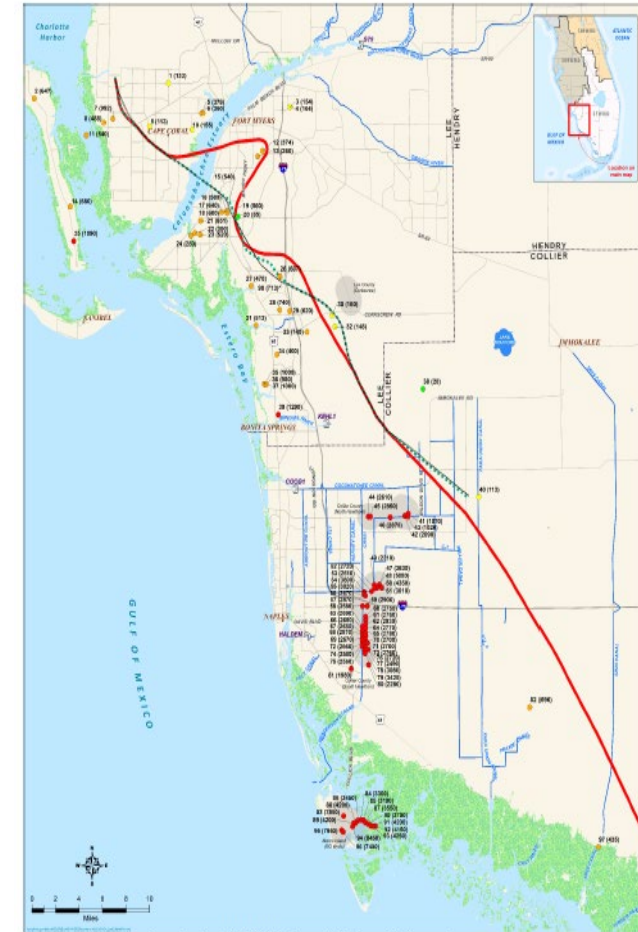


Figure 16. Position of the saltwater interface in the Mid-Hawthorn aquifer in Lee and Collier counties.

# Water Supply and Conservation Project Support

## ➤ Alternative Water Supply Funding (7 projects – 9.78 mgd)

- Ave Maria reclaimed water storage pond and distribution expansion
- Naples reclaimed water transmission expansion
- Lee County reclaimed water transmission expansion (Fiesta Village)
- Cape Coral irrigation canal pump station
- Cape Coral reclaimed water distribution expansions (2 projects)
- Cape Coral – Fort Myers reclaimed water interconnection

## ➤ Conservation Project Funding (3 projects – 0.08 mgd savings)

- Bayrock Grove Advanced Irrigation Controller
- Bishopwood Neighborhood Association SMART irrigation system
- Bonita Springs high-efficiency toilet rebate program





# Big Cypress Basin Initiatives

## ➤ Cost-Share Funding Projects

- Naples Utility Projects
  - Goodlette Frank Road Septic to Sewer Conversion
  - Reclaimed Water Expansion Phases 4 and 5
  - ASR Well #4

## ➤ System/Facility Improvements

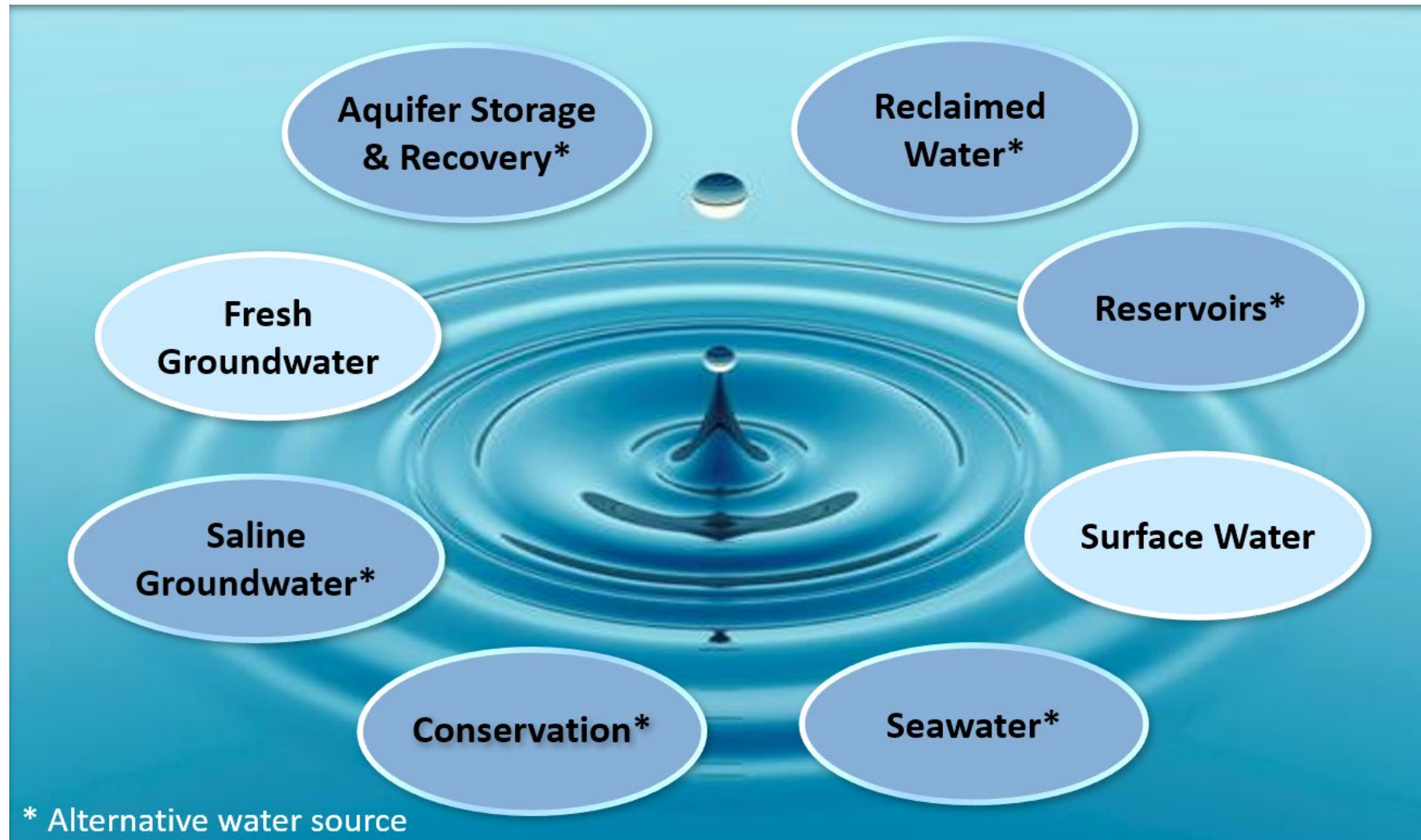
- Golden Gate 4 structure replacement – holding more water during dry season
- Remote operational systems installation
- Curry Canal control structure
- Modified dry season operation in Corkscrew Canal Basin

## ➤ BCB Regional Storage Feasibility Study

- Potential for improved flood protection for Golden Gate Basin



# Water Source Options and Alternatives

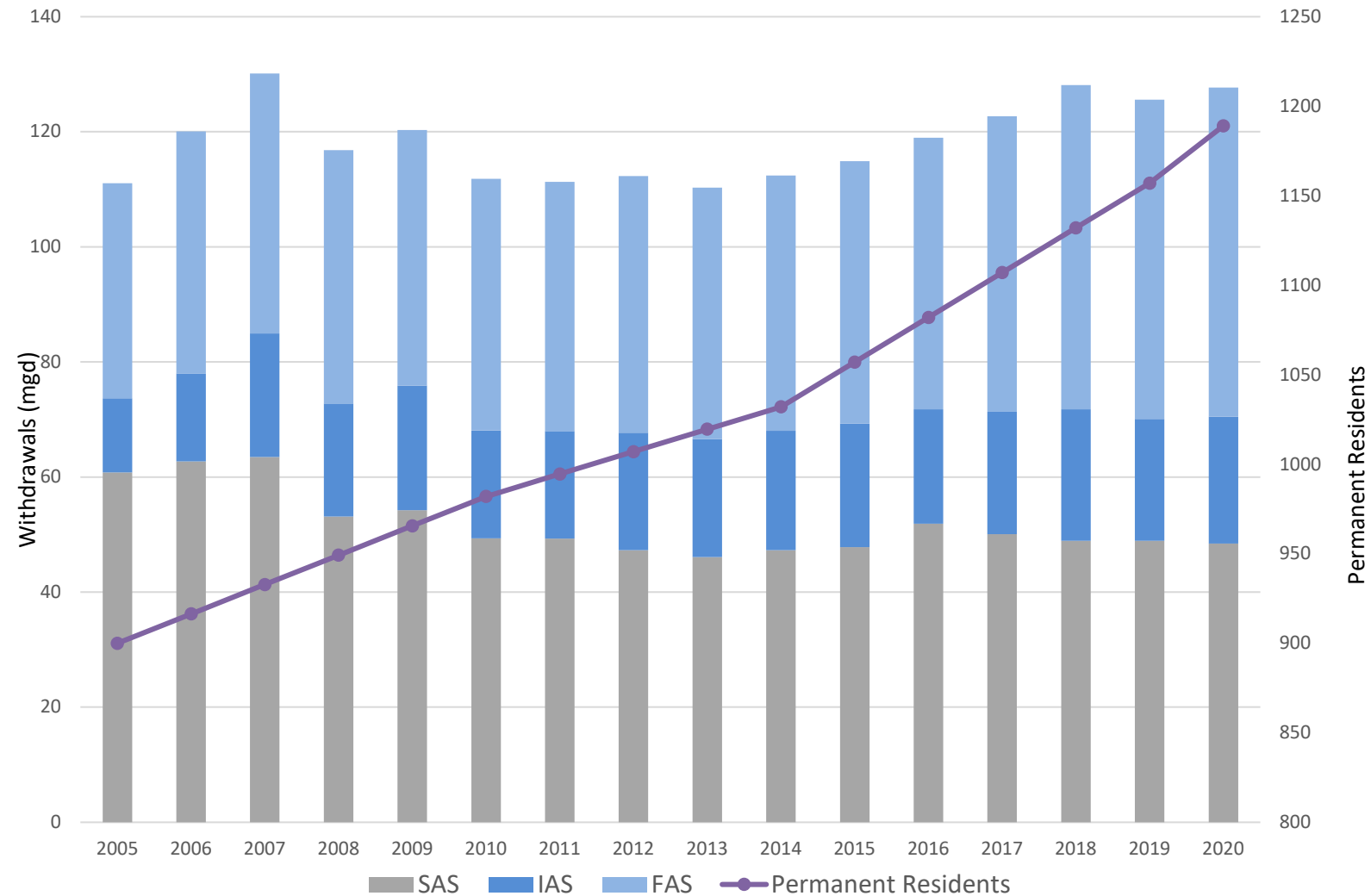




# Hydrogeology of the LWC



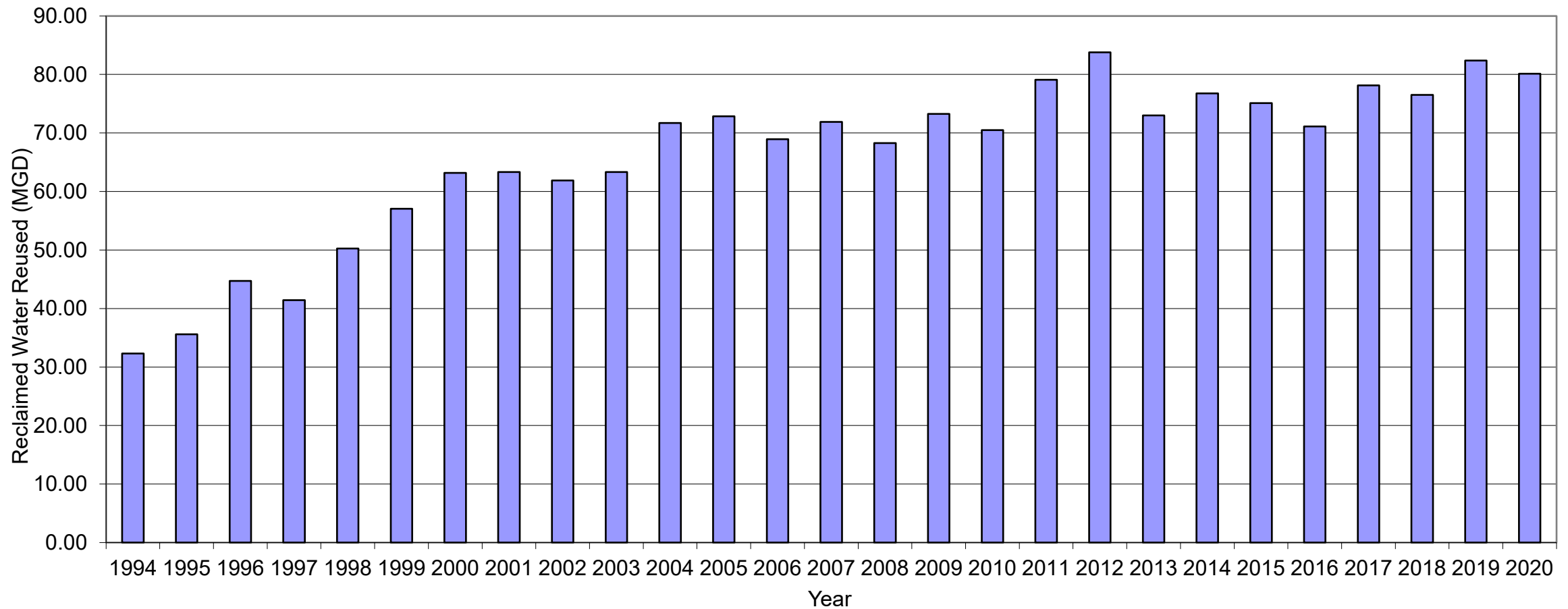
# Public Water Supply Groundwater Demands





# Reclaimed Water Usage

Reuse History in the LWC Planning Region



# Questions and Public Comment



- If you are participating via Zoom:
  - Use the Raise Hand feature
- If you are participating via phone:
  - \*9 raises hand
  - \*6 mutes/unmutes your line
- When you are called on, please state your full name and affiliation prior to providing comments and/or questions



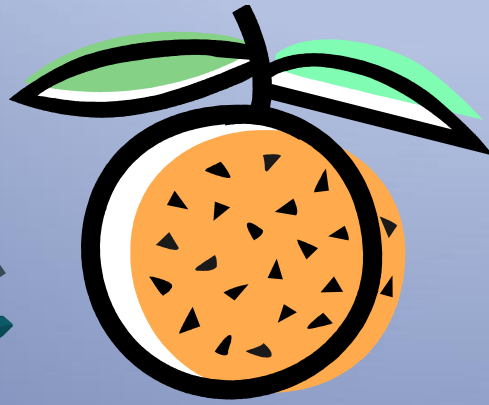
# Overview of Agriculture in Southwest Florida

Gene McAvoy

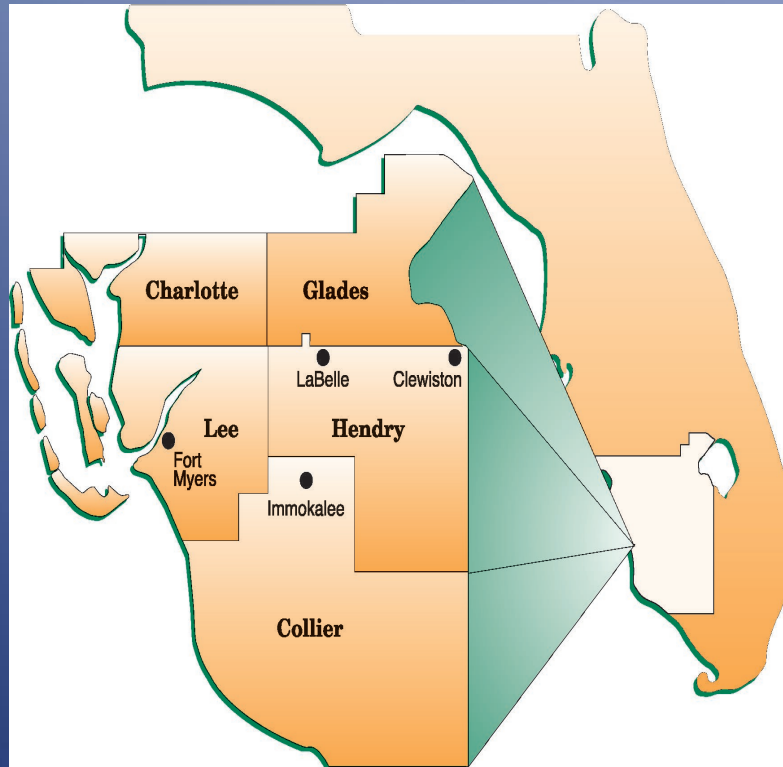
Associate Director

SW Florida Research and Extension Center



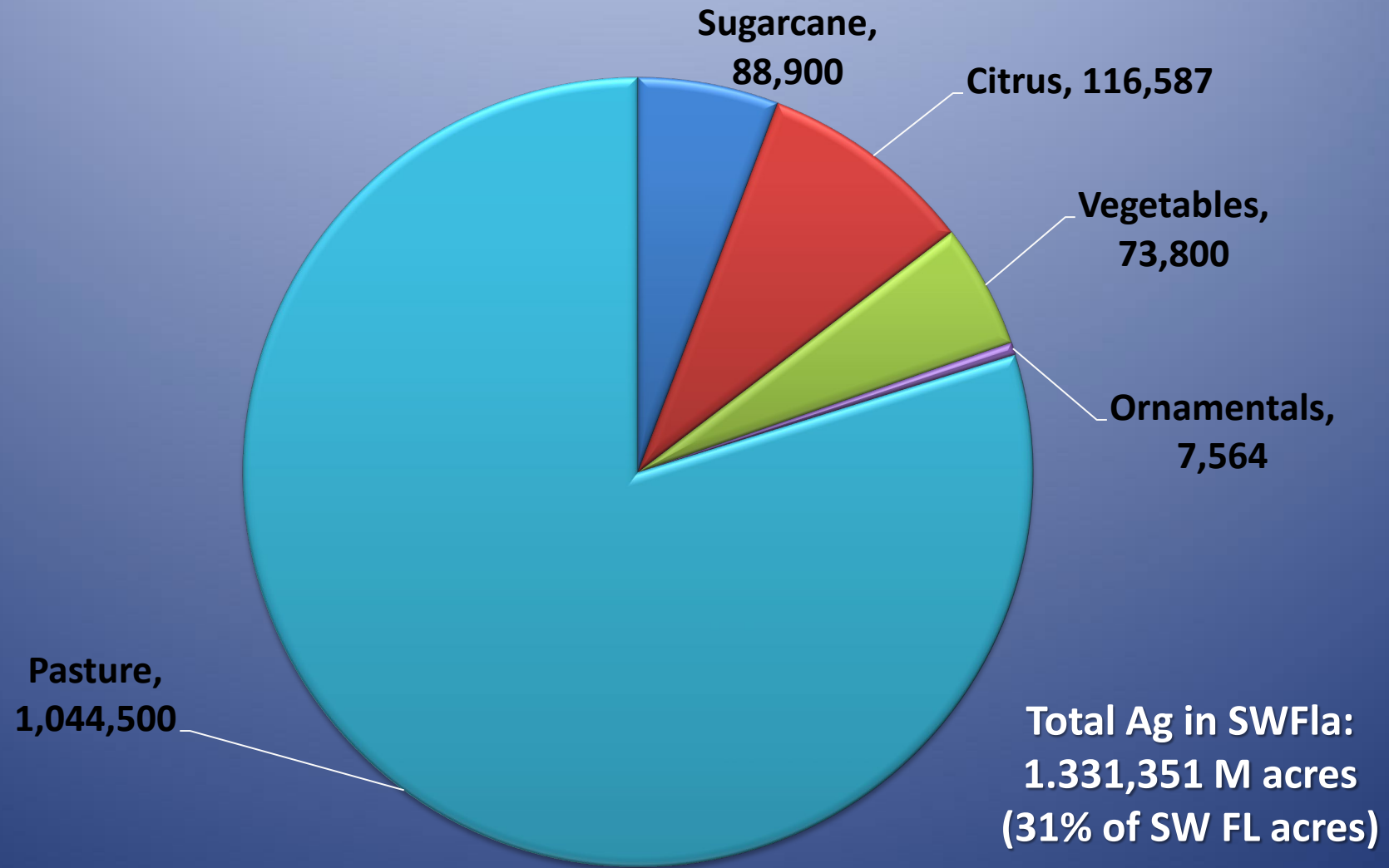


Citrus  
Vegetables  
Sugarcane  
Cattle  
Ornamentals

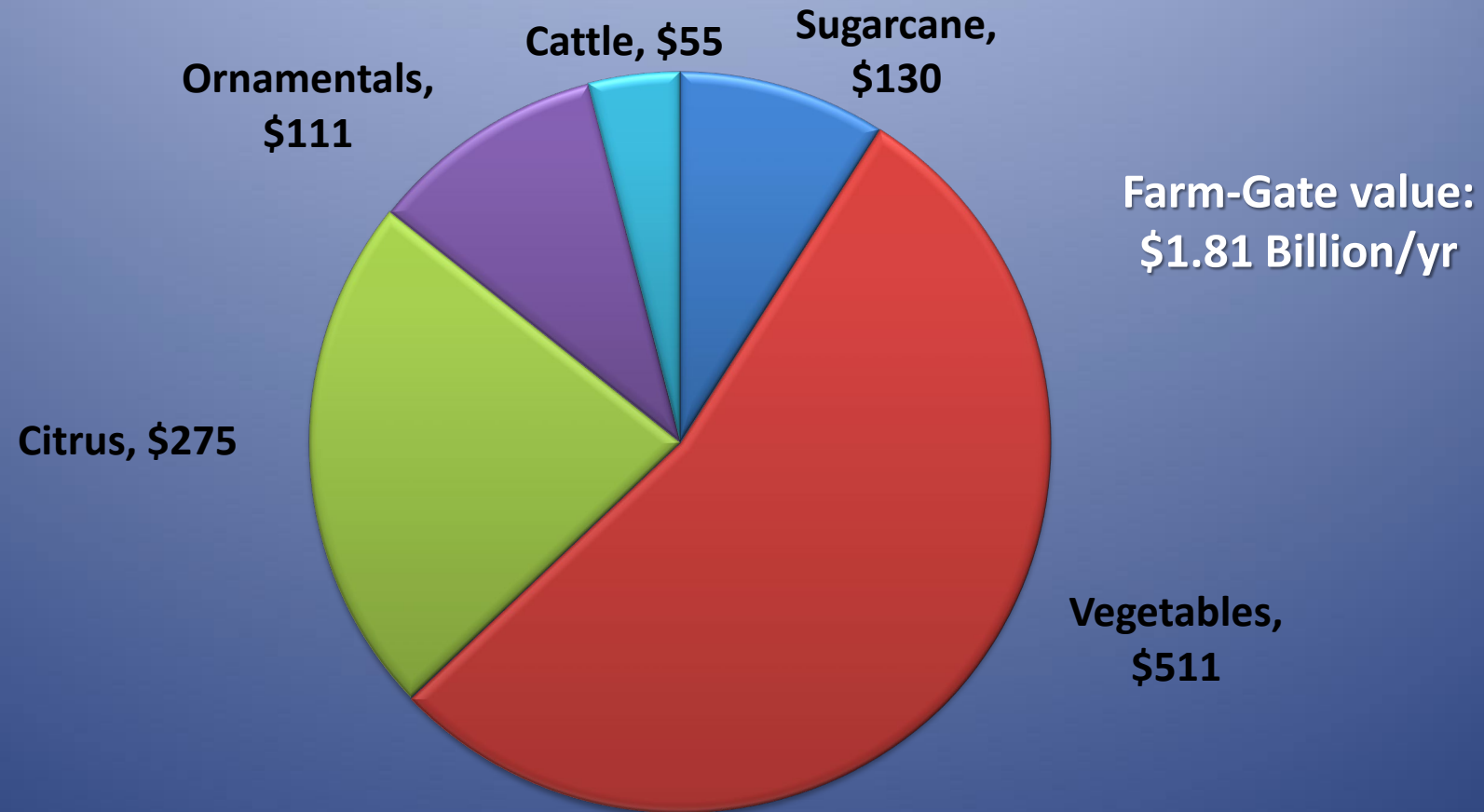




# Agricultural Acreage



# Farm-Gate Sales (2017 \$M)





# Sugarcane



- Florida's most valuable field crop, worth more than the combined value of Florida-grown corn, soybean, tobacco, and peanut crops
- Florida produces 50% of US sugar cane and 25% percent of the total sugar
- 450,000 acres valued at \$800M

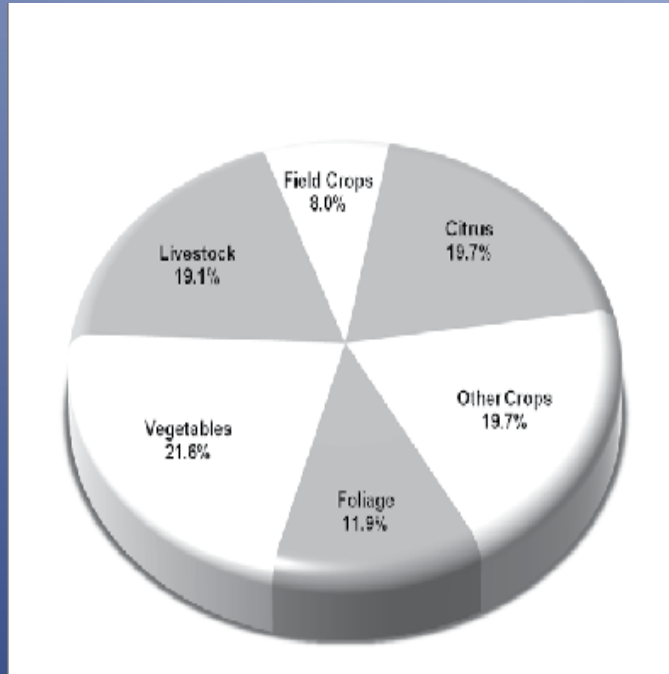
# Vegetable Production in South Florida

- Florida is America's winter garden
- Florida produces over 60 different vegetables – arugula - zucchini
- South Florida produces 70% of all vegetables consumed in the eastern US from Nov – April
- Over 10 billion dollar economic impact





# Vegetable Production



- Recently, vegetables have passed citrus as the number one commodity in the state accounting for over 21% of all agricultural sales.





# What's Growing in SW Florida

Product	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Bell Pepper												
Blueberries												
Broccoli												
Cucumber												
Eggplant												
Grapefruit												
Oranges												
Peaches												
Potatoes												
Snap Beans												
Squash												
Strawberries												
Sweet Corn												
Tangerines												
Tomatoes												
Watermelon												



# Green Industry



- Florida is one of the top ornamental horticulture producers in the United States, ranked second only to CA
- Sod, nursery, trees, shrubs, landscaping services
- Total industry sales were estimated at over \$12.33 B generating nearly 250,000 jobs
- New construction spurring demand

# High Values-High Cost-High Risk

Annual costs of production (inc harvest):

- Oranges for juice: \$ 3,000/ac
- Fresh market tomatoes: \$12,000/ac
- Fresh market bell peppers: \$16,000/ac
- Sugarcane: \$ 1,000/ac

*(Iowa field corn: \$650/ac)*



# Economic Impact

- Economic Impact =
  - \$1.0 Billion, farm-gate sales (stable)
  - \$1.6 Billion, total economic impact
- Additional economic impact from Processing Plants (citrus juice and sugarcane)
- >90% of total farm products (raw or processed) exported – “new dollars”

# Summary of Economic

## Contributions of Agriculture, Natural Resources, and Food Industries in SW FL

County	Employment		Industry Output		Value Added Contrib.	Labor Income Contrib.	Other Property (MS)	Taxes (MS)
	Direct (Jobs)	Contrib. (Jobs)	Direct (MS)	Contrib. (Jobs)				
Glades	1,695	2,235	217	317	164	98	54	6
Hendry	9,548	12,357	931	1,458	761	620	75	36
Charlotte	11,331	15,214	841	1,486	943	576	161	85
Collier	40,276	54,352	3,273	5,841	3,294	2,205	762	275
Lee	59,230	81,038	4,964	8,796	4,745	3,019	1,209	458

Source: Court, C.D., J-P. Ferreira, 2020, May 15. "2018 Economic Contributions of Agriculture, Natural Resource, and Food Industries in Florida." UF/IFAS Economic Impact Analysis Program, Gainesville, Florida.

Agricultural production is a business. Significant financial resources are required to grow crops. Land will remain in agriculture so long as growers receive a long-run return on investments.

# The Future

- South FL sunshine + “relatively” warm winter temps
  - northern U.S. markets
- Rising national demand for fresh vegetables and increasing interest in “ethnic” foods
- Rapid urbanization on east and west coasts pushing agriculture into interior SW Florida
- Expansion of sugarcane and traditional “muck” crops like corn/beans onto sand lands



# The Future

- Global competition and trade policies
- Access to labor - farm worker health and welfare
- Water quality and management issues
- “Green” payments (?)
  - Water farming
  - Carbon credits
- Development pressures
- Production costs skyrocketing
- Higher fuel could benefit Florida

# New Crops

- Artichokes
- Blueberries
- Hemp
- Hops
- Pomegranates
- Pongamia
- Tea
- Vanilla
- Will interest bio-fuels  
come back





# Precision Agriculture

- Exciting new technologies are emerging – do more with less
- Precision GPS guided equipment
- Cloud based technology
- Creating new jobs/replacing hand labor?
- Growers can't compete on the basis of cheap land or labor – they must compete on the basis of technology





## Reasons for Automation

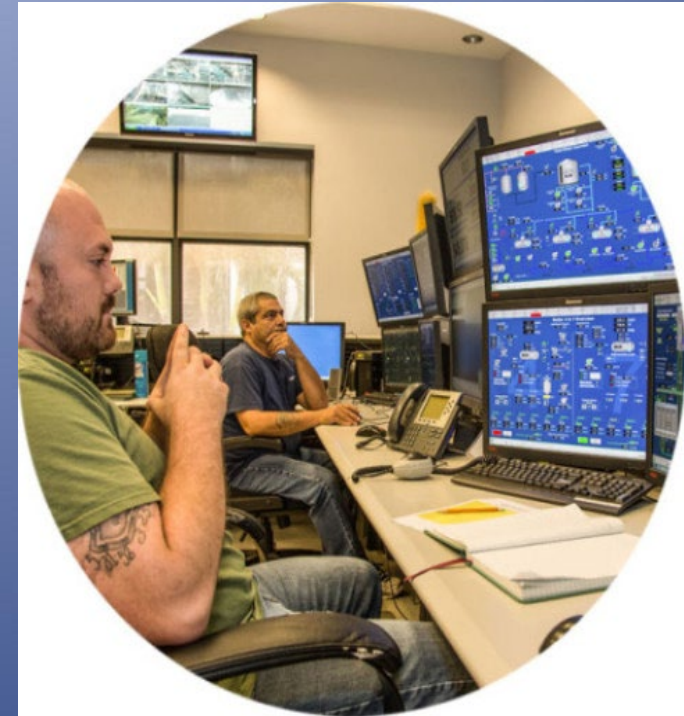
### Three D's:

- Dirty
- Dull
- Dangerous



# Cloud Based Technology

- U.S. Sugar has the largest, contiguous, privately owned Wi-Fi network in the country, providing wireless network coverage for its operations in a 270-square-mile area.
- Coordinates the timing of harvesting operations with railroad transportation and its mill operations and more.
- Data analysis – increased efficiency



# Smart Sprayers



90% reduction in chemical usage



Sensors detect size of trees turning off and on nozzles to apply precise amount of products precisely where needed



# Drip and Microjet Irrigation



Precision irrigation spoon feed crops with 30% of the water – controlled remotely via smartphone

# Improved Genetics

- Improved yields, resistance to pests and diseases
- Cold, heat, drought tolerance
- Classic plant breeding
- Genetic engineering
- CRISPR-Cas9 – gene editing



# Intangible Benefits

- Florida agriculture provides a number of intangible benefits including environmental services that must not be discounted.
- Wildlife and native plant system populations thrive on Florida's farms, ranches, and forests.





# Agro/Eco-Tourism



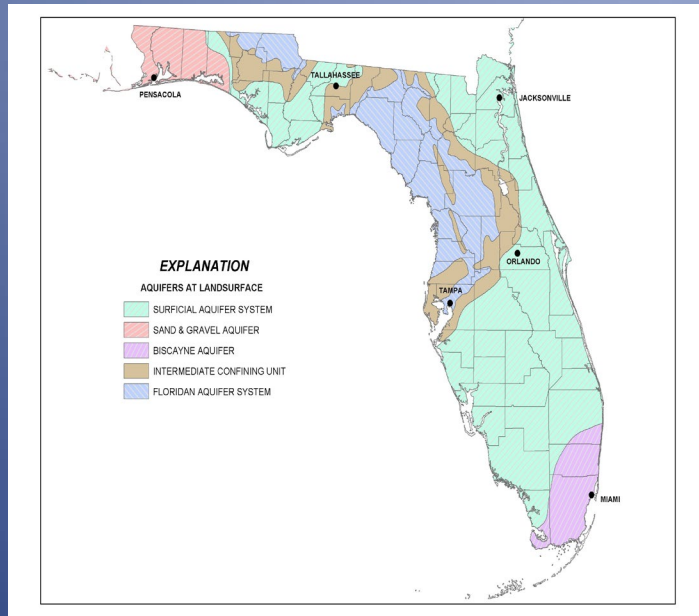
- Growing demand for Agro/ecotourism opportunities - “Agritainment”
- Bringing Florida's two economic engines (tourism and agriculture) together to increase the value of farms and to expand the array of recreation experiences offered in Florida
- Many people are generations removed from the farm and are hungry for such experiences
- Birding to mudding







# Aquifer Recharge



- Unlike parts of N Florida which utilize the Floridan aquifer, much of the state depends on superficial aquifers.
- All the water we have to drink is what falls on the ground during the summer rainy season.
- Ag provides healthy “green spaces” which filter and recharge underground water supplies.



# Water Farming

- Use of agricultural lands to capture and hold water on property in an effort to prevent it from traveling to ecologically sensitive areas
- Intercept and hold water to reduce discharges



# Agricultural Water Trading



- Traditional groundwater sources are not sufficient to meet the future water demands without unacceptable impacts to the natural system.
- Public supply and irrigation account for 82% of groundwater withdrawals.
- More efficient irrigation coupled with use of reclaimed water could result in more water for public supply.

# Going Forward



- The world will have to produce more food in the next 50 years than we have in the last ten thousands years since civilization began
- With fewer resources and less environmental impact



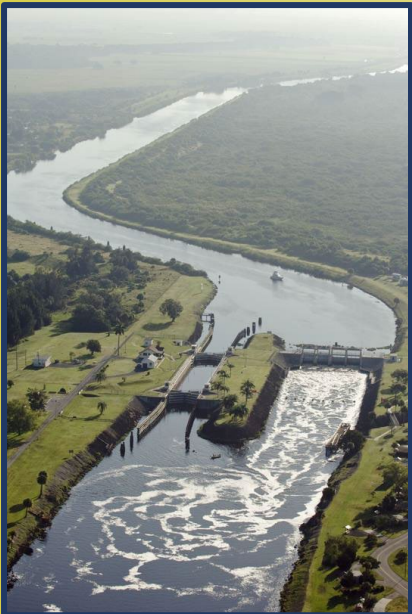
# Questions



Gene McAvoy  
Associate Director for Stakeholder Relations  
University of Florida IFAS Southwest Florida Research and  
Education Center  
Regional Vegetable Extension Agent IV Emeritus  
863-673-5939 cell  
gmavoy@ufl.edu



# Demand Estimates and Projections



**Coleen Jordan**  
Demographer

2022 LWC Stakeholder Kickoff Meeting  
March 15, 2022





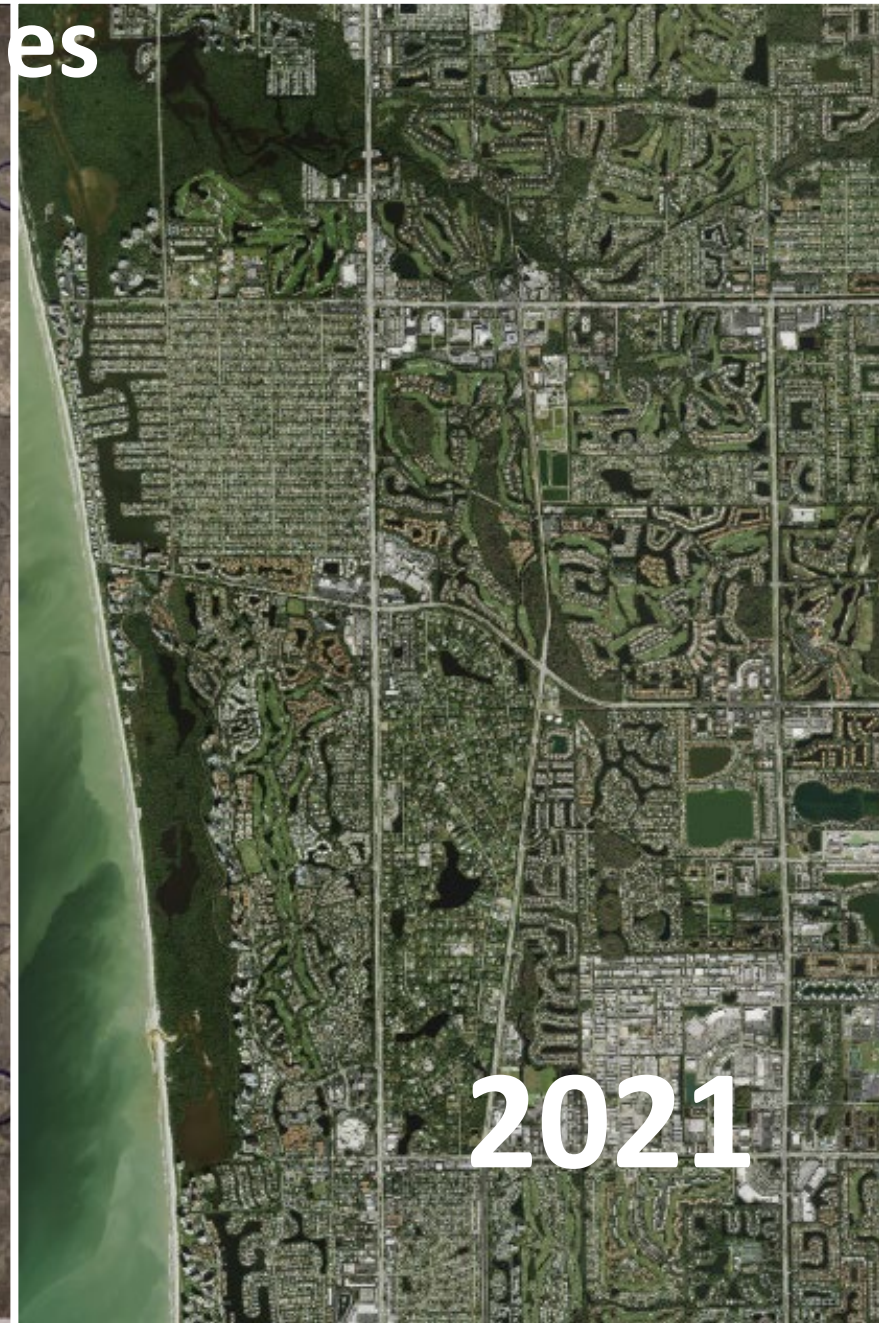
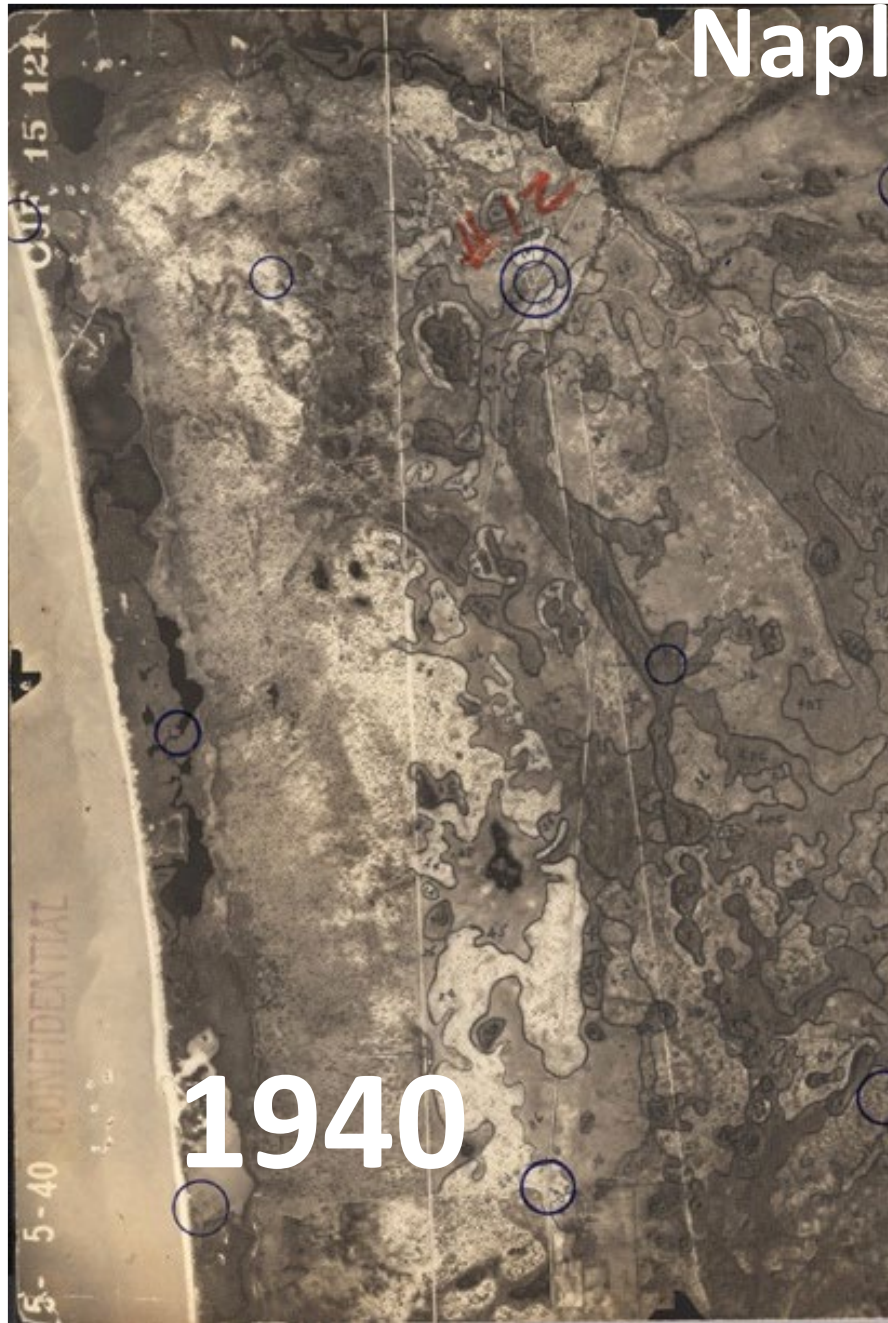
# Observations Since the 2017 LWC Update

- Irrigated agriculture projected to remain stable through 2045
- Citrus and sugarcane are still the dominant crops
- Robust economic growth
- Expanding utility service areas
- Minor increase in golf course development





# Naples



# Water Use Categories

1. Public Supply (PS)
2. Domestic Self-Supply (DSS)
3. Agriculture (AG)
4. Commercial/Industrial/Institutional (CII)
5. Landscape/Recreational (L/R)
6. Power Generation (PG)



# Principles for Urban Demand Estimates and Projections

- Section 373.709, Florida Statutes
- Maintain \*BEBR-medium county totals
- Accurately describe relative growth across the LWC
- Identify and use best available data
- Simple, reproducible, and transparent methodology
- Consistent with local government population planning estimates

\* The University of Florida's Bureau of Economic and Business Research (BEBR) produces Florida's official state and local population estimates and projections.



# Population Projections

## Estimate 2020 Baseline and Projected Populations

US Census and  
\*BEBR annual  
reports 2020-2045

## Define Current and 2045 Service Area Boundaries

Coordination  
with Utilities

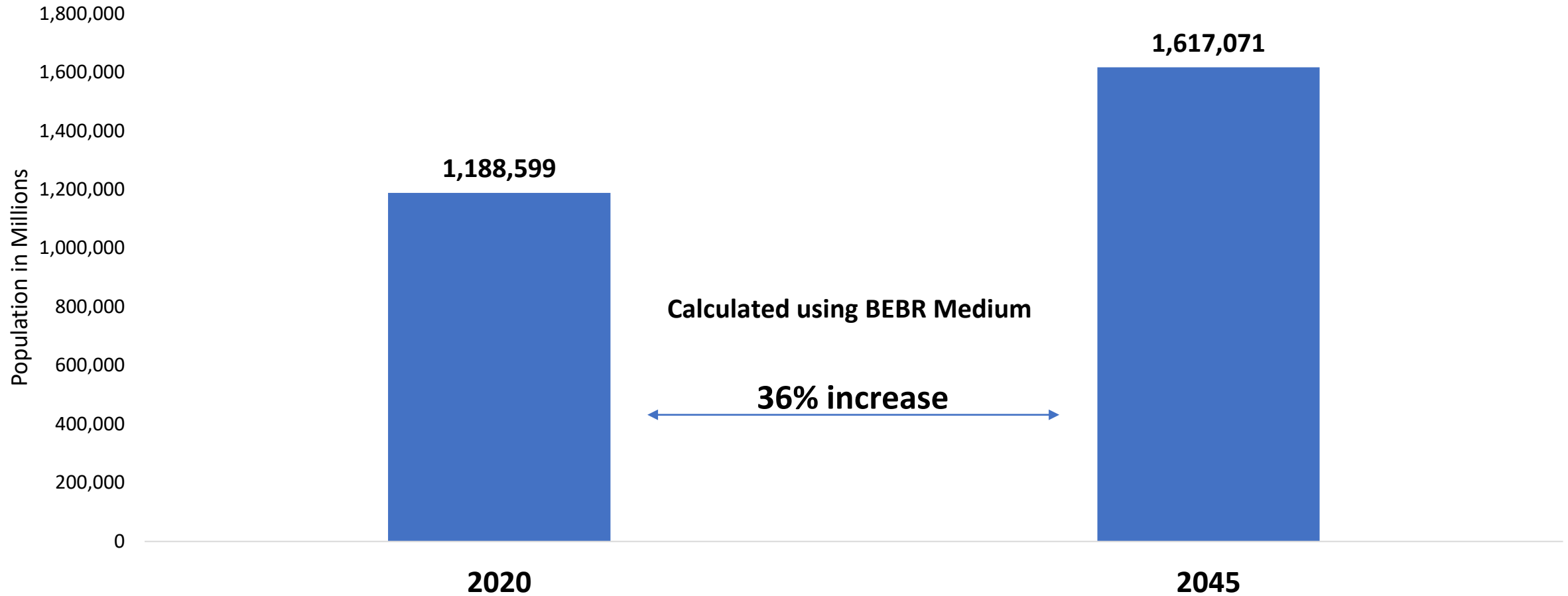
## Distribute BEBR Projections to Service areas

Projections based  
on county growth  
rates published by  
BEBR

## Review with Stakeholders

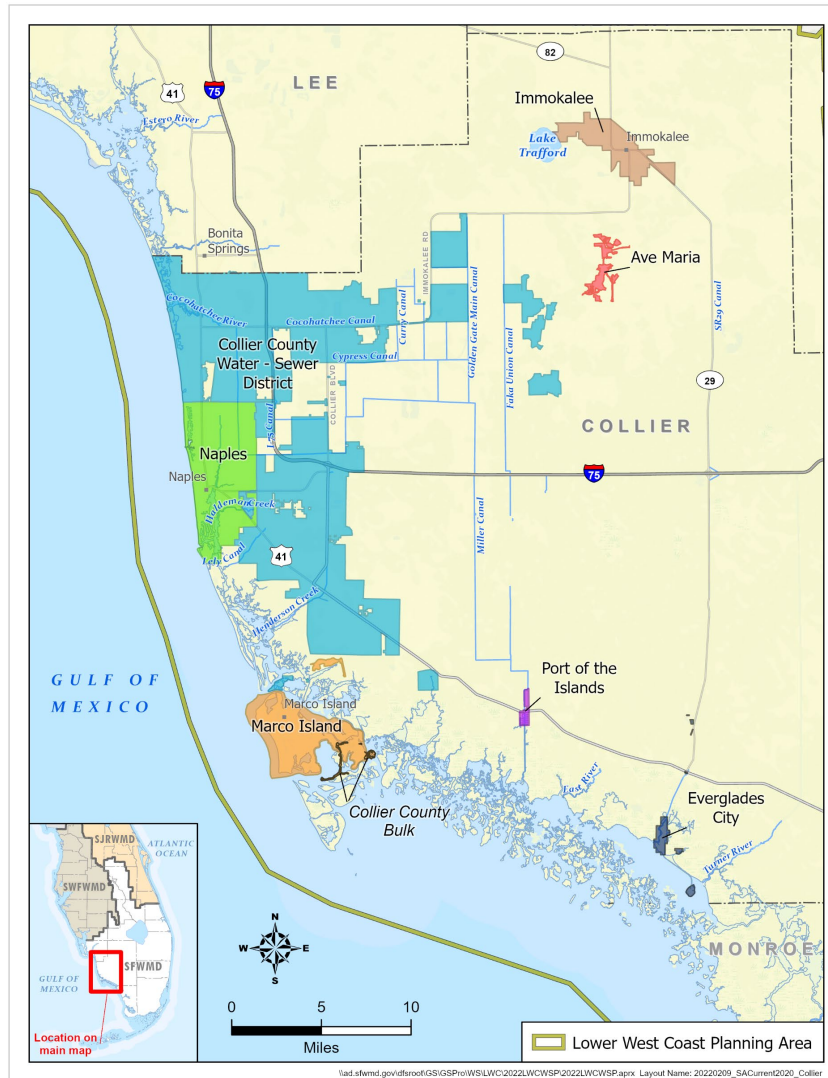
Consideration of  
adjustments based  
on local input

# LWC Population Projection

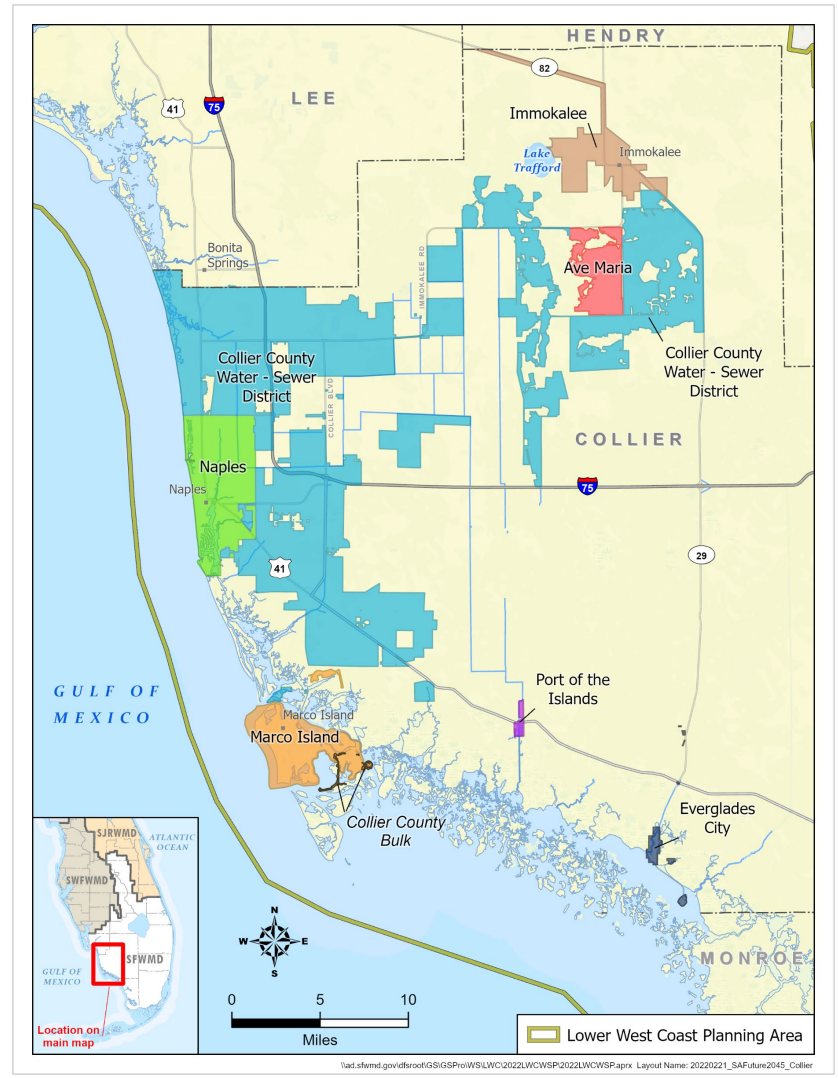


# Utility Service Areas in Collier County

## 2020



## 2045



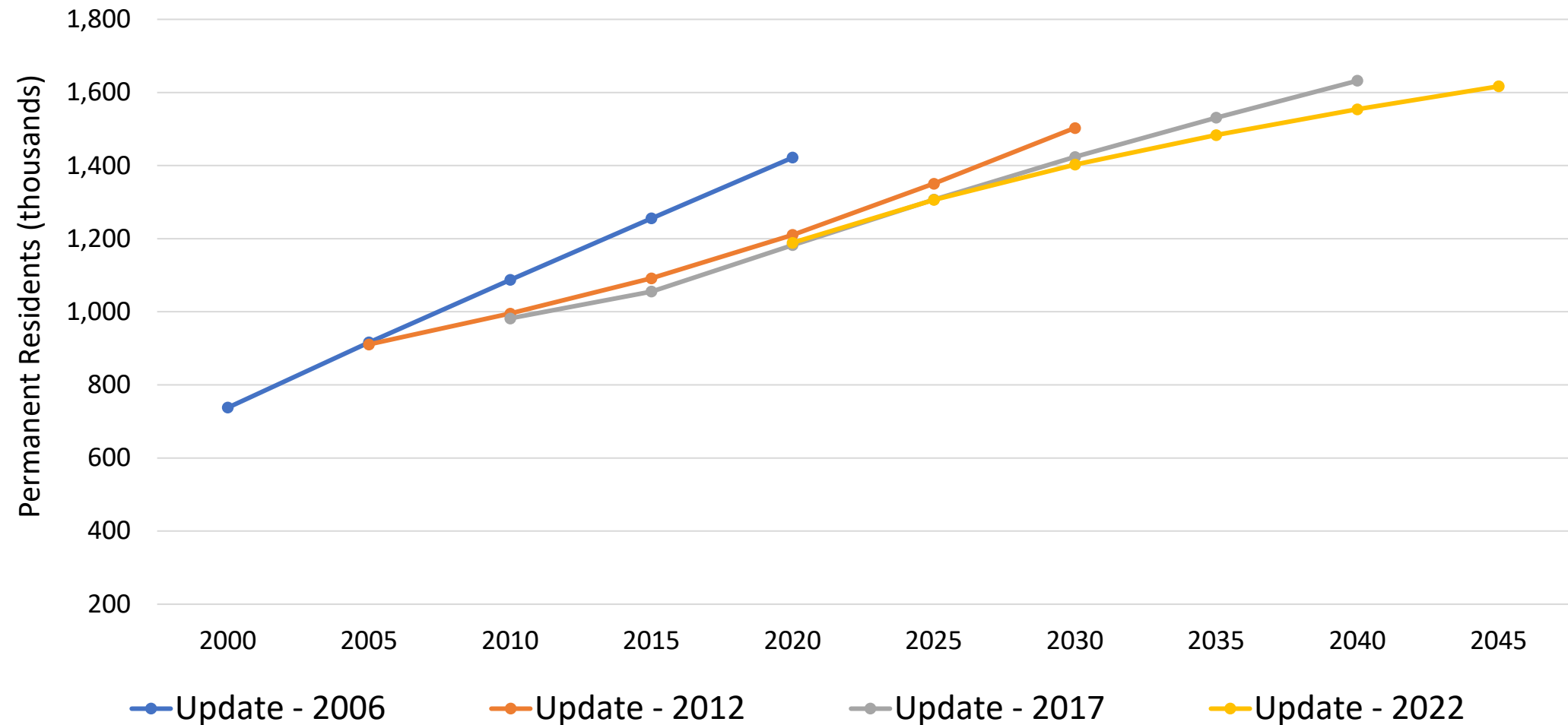


# Draft LWC Population Projections

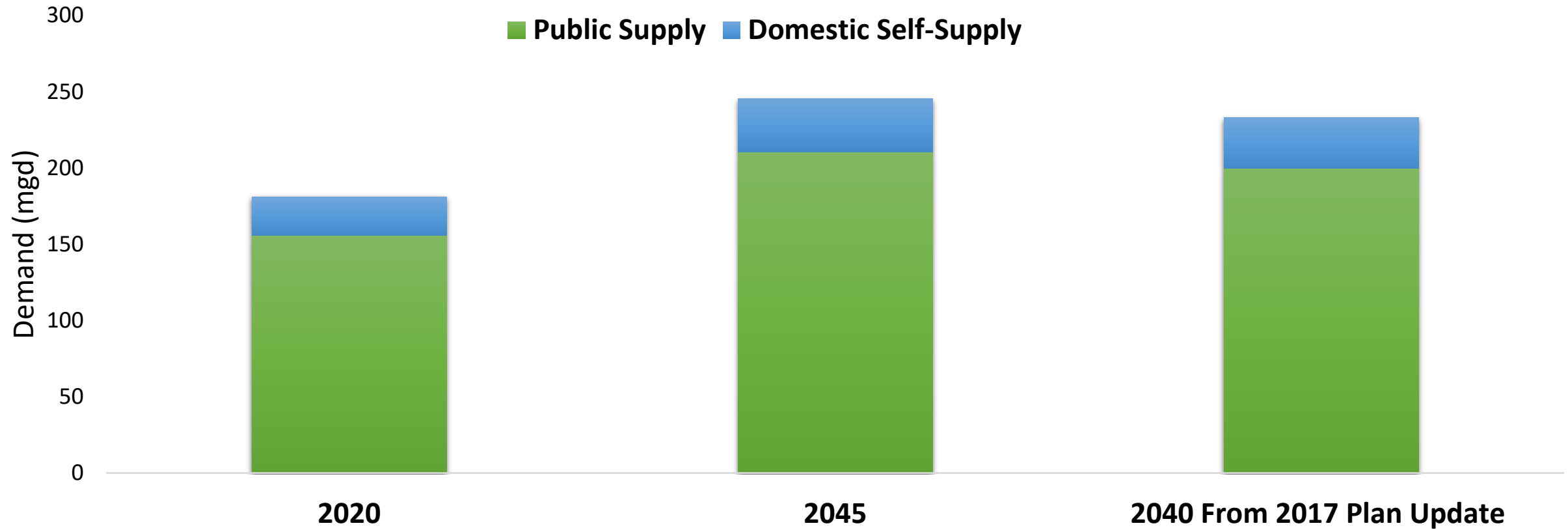
- **Public Supply (PS)** – Potable water supplied by water treatment plants with a current allocation of 0.10 million gallons per day (mgd) or greater.
- **Domestic Self-Supply (DSS)** – Potable water used by households served by small utilities (less than 0.10 mgd) or self-supplied by private well.

		2020	2045	% Change
Charlotte	PS	2,506	2,875	15%
	DSS	3,131	4,400	41%
	<b>Total</b>	<b>5,637</b>	<b>7,275</b>	<b>29%</b>
Collier	PS	313,393	414,257	32%
	DSS	74,057	104,743	41%
	<b>Total</b>	<b>387,450</b>	<b>519,000</b>	<b>34%</b>
Glades	PS	4,906	5,942	21%
	DSS	4,484	5,029	12%
	<b>Total</b>	<b>9,390</b>	<b>10,971</b>	<b>17%</b>
Hendry	PS	27,551	28,934	5%
	DSS	8,078	12,391	53%
	<b>Total</b>	<b>35,629</b>	<b>41,325</b>	<b>16%</b>
Lee	PS	645,114	894,720	39%
	DSS	105,379	143,780	36%
	<b>Total</b>	<b>750,493</b>	<b>1,038,500</b>	<b>38%</b>
LWC Total	PS	993,470	1,346,728	36%
	DSS	195,129	270,343	39%
	<b>Total</b>	<b>1,188,599</b>	<b>1,617,071</b>	<b>36%</b>

# Population Projections by Plan Updates



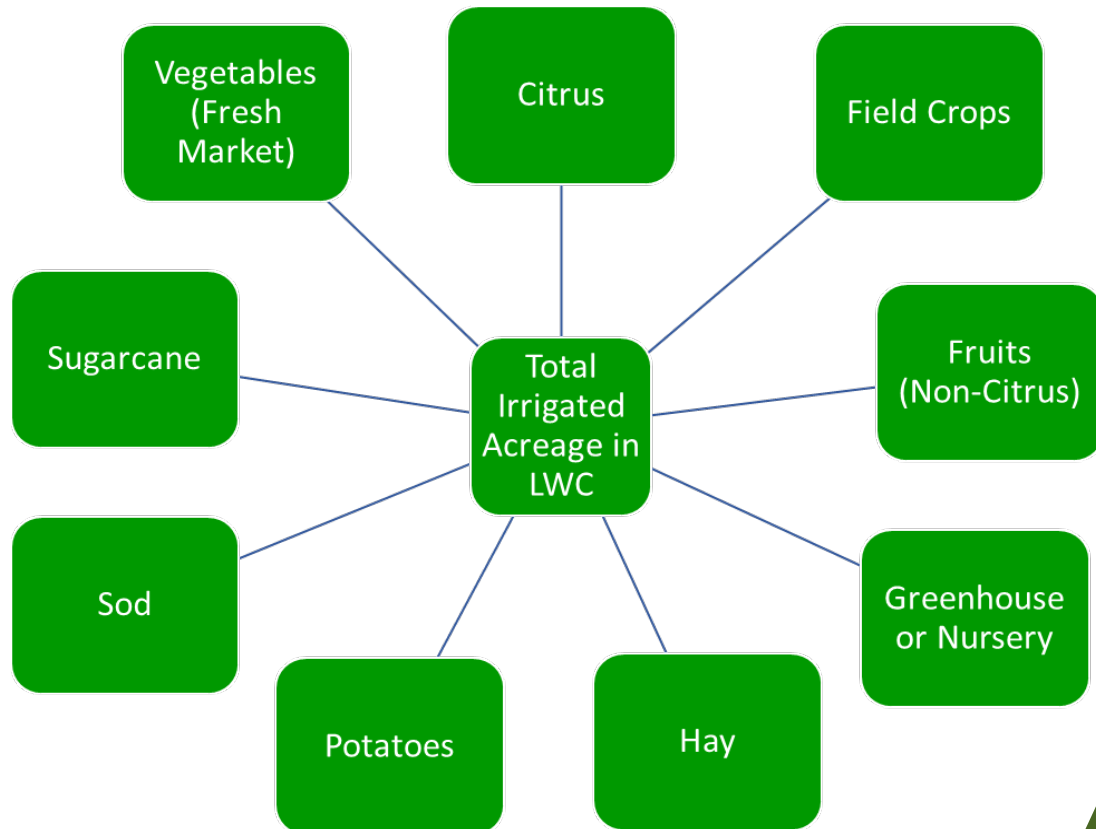
# Public Supply and Domestic Self-Supply Demands





# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture (Largest category in the LWC)
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. Power Generation



# Crop Categories

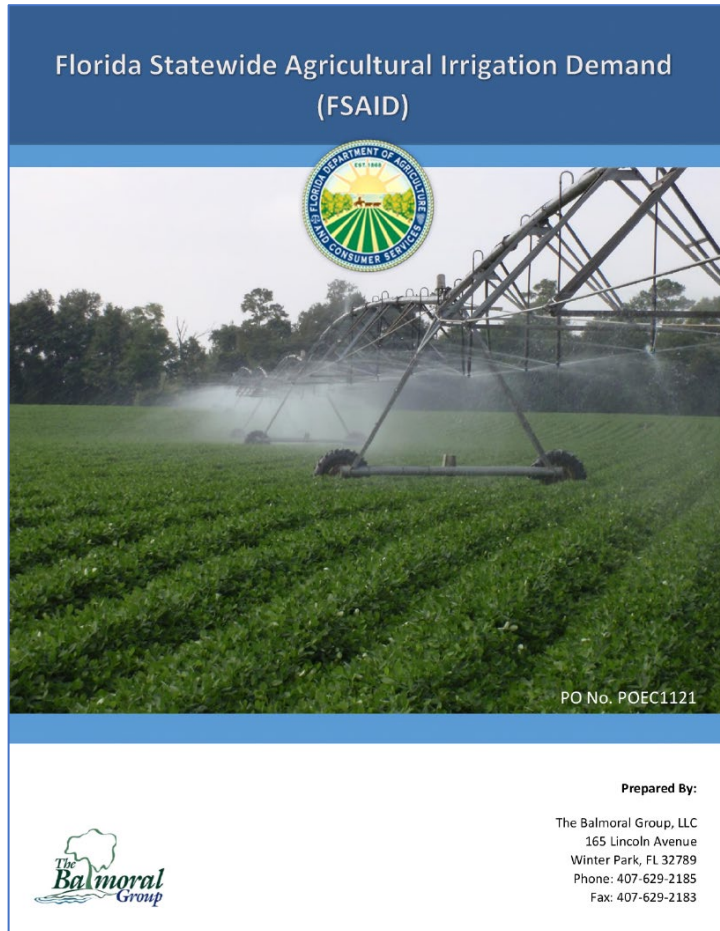


## Data Sources for Agricultural Projections

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# Statutory Basis for Projections



- 2013 legislation (Section 570.93, Florida Statutes) requires FDACS to develop statewide agricultural demand projections
  - Acreage – historical, current, and 20-year projection, by crop
  - Demands for average rainfall and 1-in-10-year drought, by crop
  - Metered data factored into estimates of historical and current demands
  - Consult with stakeholders
- FDACS publishes the annual Florida Statewide Agricultural Irrigation Demand (FSAID) report

# Statutory Basis for Projections

- Section 373.709, Florida Statutes: Agricultural demand projections in water management districts' regional water supply plans should be based on best available data
  - Must consider data of future demands provided by FDACS
  - Any deviation from data must be described
  - FDACS data are presented with adjusted data



# Basic Components of Agricultural Demand Projections

## Irrigated Acreages

- FSAID Irrigated Lands Geodatabase

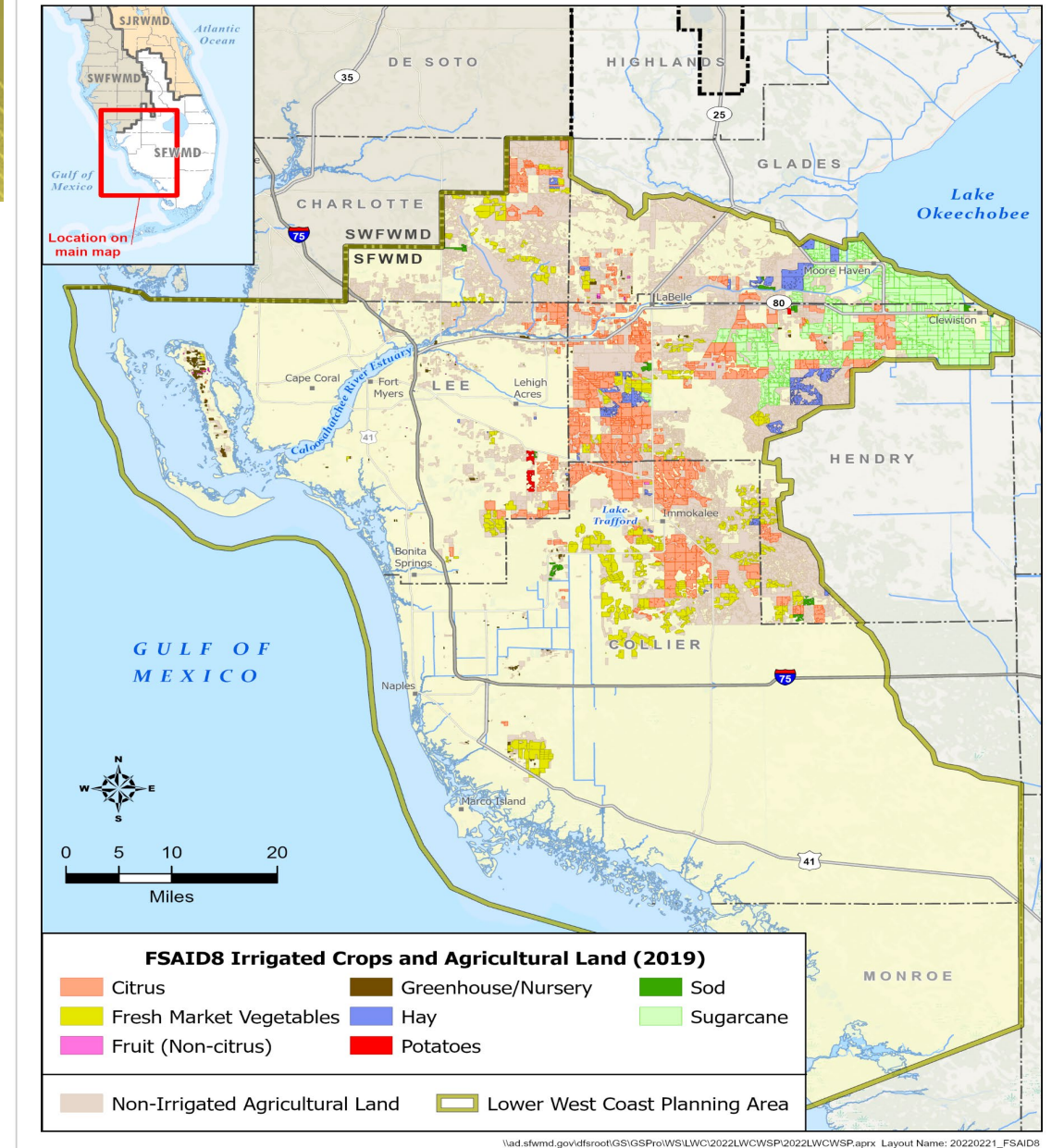
## Water Demand Models

- FSAID water use model
- Agricultural Field-Scale Irrigation Requirements Simulation (AFSIRS) model

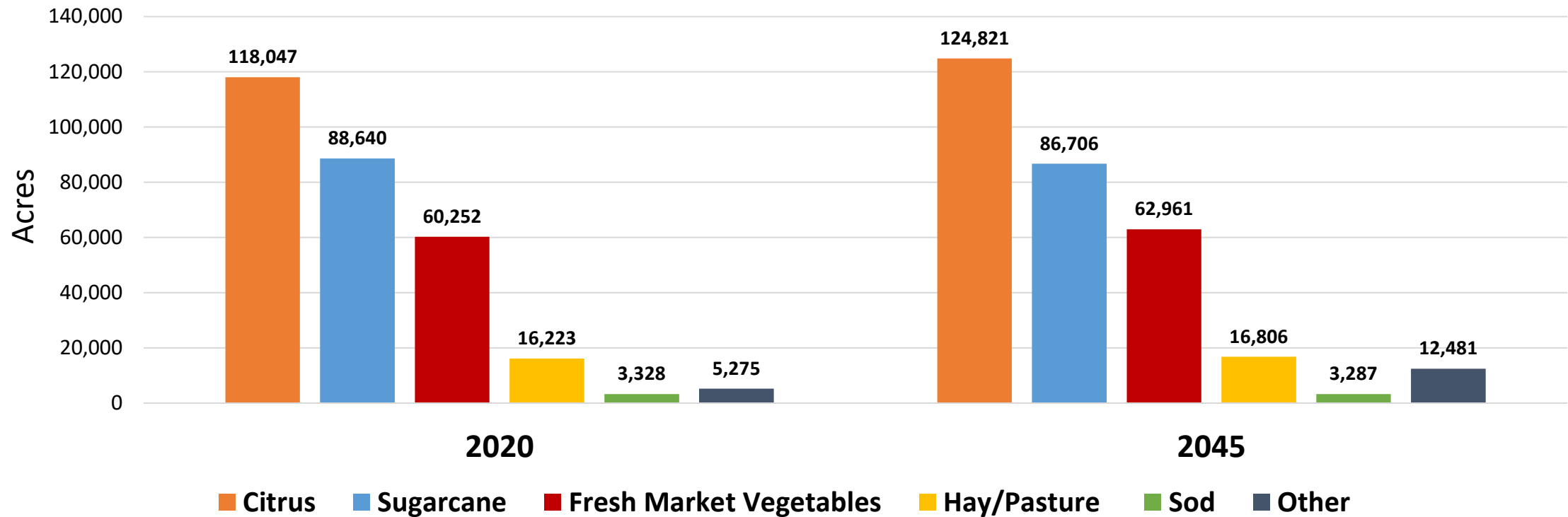


# Agriculture in LWC

## FSAID8/FDACS Lower West Coast Irrigated Agricultural Areas



# LWC Agricultural FSAID8 Acreage



Acres	2020	2025	2030	2035	2040	2045
FSAID 8 Updated (2022 LWC Plan)	291,765	291,899	295,709	299,870	303,383	307,062
FSAID 3 Projections (2017 LWC Plan)	315,555	320,967	325,941	332,789	339,648	-

# AFSIRS and FSAID

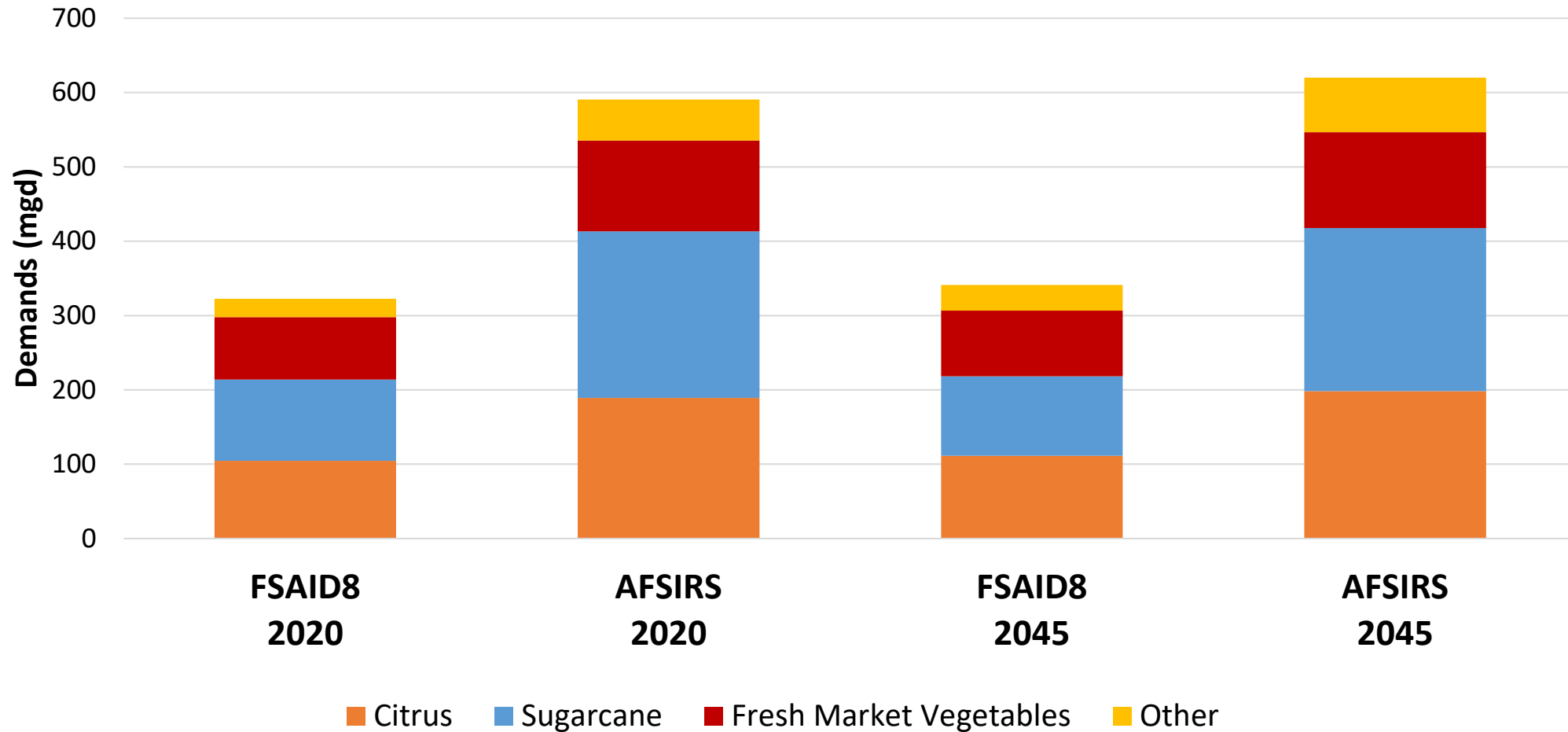
## Water Demand Model Comparison

AFSIRS	FSAID
Built with data from University of Florida field experiments	Built with available reported water use from all water management districts
Uses a wide range of location-specific environmental variables	A limited set of environmental variables are used directly in the model
Does not consider changing irrigation intensities in response to crop profitability	Irrigation intensities vary in response to crop profitability

Agricultural Field-Scale Irrigation Requirements Simulation (AFSIRS)

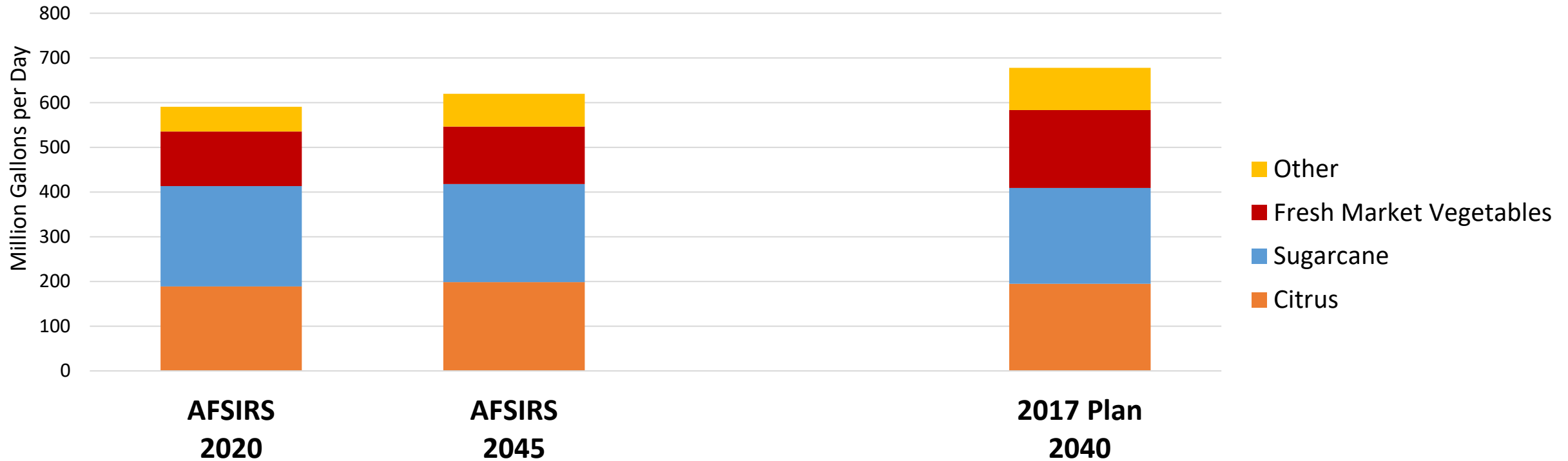


# Comparison of FSAID8 and AFSIRS Demands



- ❖ The District uses bigger demand projections to remain conservative with its planning efforts.
- ❖ AFSIRS model is similar to the model used to establish water use permit allocations in the region.

# LWC Agricultural Demands



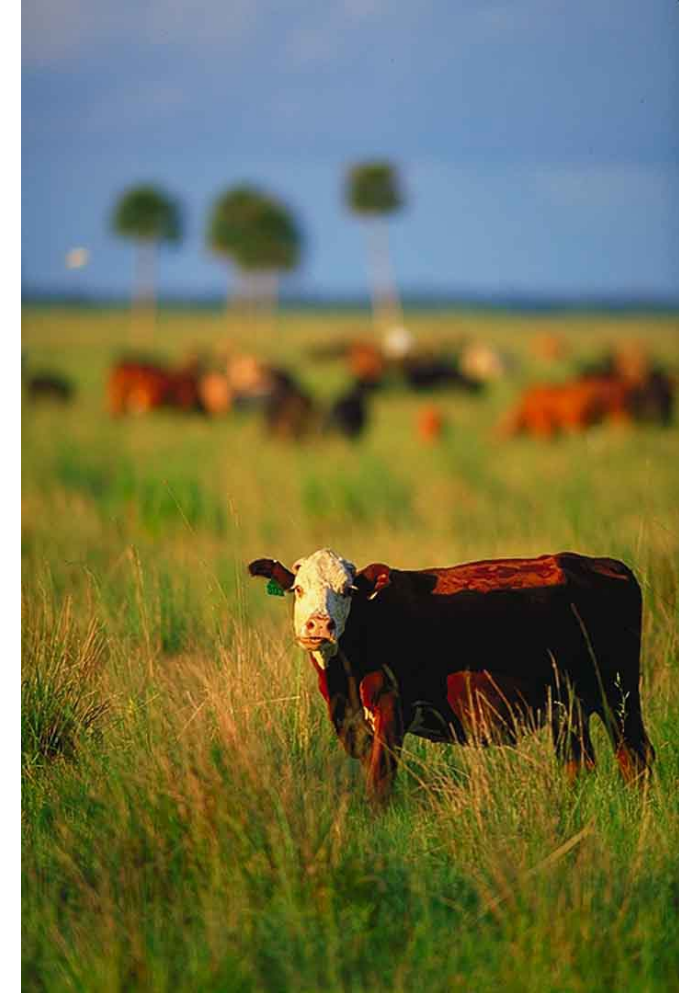
Million Gallons per Day	2020	2025	2030	2035	2040	2045
AFSIRS (2022 LWC Plan)	590.54	586.05	590.15	598.86	608.48	619.92
AFSIRS (2017 LWC Plan)	634.93	644.66	653.01	665.92	678.83	

# Draft LWC Agriculture Demands Summary

Agriculture Subcategory	2020	2045
Crops	590.54	619.92
Livestock	1.48	1.13
Aquaculture	0.44	0.44
<b>LWC Planning Area Total</b>	<b>592.46</b>	<b>621.49</b>

Demands in million gallons per day.

**Total = 5% Increase**





# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. Power Generation

# Commercial/Industrial/Institutional Demands

## ➤ Methodology

- Baseline estimates based on permitted allocation
- Water returned directly to withdrawal source not considered demand
- Mining operations projected to grow with region's population

County	Demand (mgd)	
	2020	2045
Charlotte	0.07	0.09
Collier	7.52	10.14
Glades	13.76	16.26
Hendry	4.59	5.38
Lee	11.79	16.36
<b>LWC Planning Area Total</b>	<b>37.73</b>	<b>48.23</b>

Demands in million gallons per day.

**Total = 28% Increase**

# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. Power Generation



# Landscape/Recreational

## ➤ Methodology

- 2019 acreage based primarily on District land use data
- Water demands based on reported volumes
- Landscape category projected to grow with population
- Only planned and approved golf construction

County	2020	2045
Charlotte	1.87	2.48
Collier	56.47	59.25
Glades	0.18	0.20
Hendry	0.64	0.74
Lee	78.89	102.55
<b>LWC Planning Area Total</b>	<b>138.05</b>	<b>165.22</b>

Demands in million gallons per day.

**Total = 20% Increase**

# Water Use Categories

1. Public Supply
2. Domestic Self-Supply
3. Agriculture
4. Commercial/Industrial/Institutional
5. Landscape/Recreational
6. Power Generation

# Power Generation Demands

County	Demand (mgd)	
	2020	2045
*Lee	0.53	0.53
<b>LWC Planning Area Total</b>	<b>0.53</b>	<b>0.53</b>

Demands in million gallons per day.

\* These demands were based on the (FP&L) Fort Myers Power Plant's average daily use in 2020.



FP&L Hammock Solar Energy Facility



# Lower West Coast Draft Water Demands (mgd) Summary

Water Use Category	2020	2045	2040 From 2017 Plan Update
Public Supply	155.95	210.35	199.88
Domestic Self-Supply	25.25	35.00	33.18
Agriculture	592.46	619.92	678.83
Commercial/Industrial/Institutional	37.73	48.23	29.07
Landscape/Recreational	138.05	165.22	254.32
Power Generation	0.53	0.53	15.4
<b>LWC Planning Area Total</b>	<b>949.97</b>	<b>1,079.25</b>	<b>1,210.68</b>

**2022 LWC Demand Total = 14% Increase**

Demands in million gallons per day.

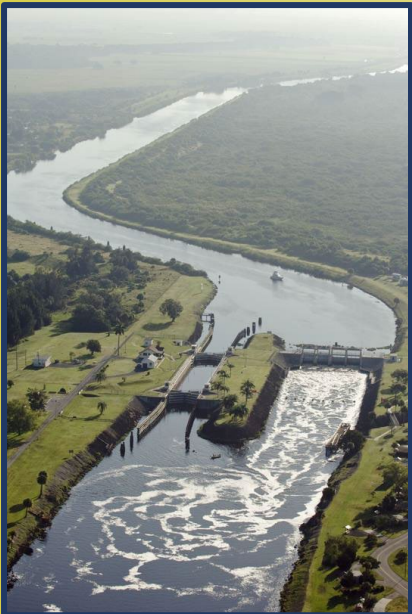
# Questions and Public Comment



- If you are participating via Zoom:
  - Use the Raise Hand feature
- If you are participating via phone:
  - \*9 raises hand
  - \*6 mutes/unmutes your line
- When you are called on, please state your full name and affiliation prior to providing comments and/or questions



# 2022 Plan Update Next Steps



**Bob Verrastro, P.G.**

LWC Water Supply Plan Manager

2022 LWC Stakeholder Kickoff Meeting

March 15, 2022





# Objectives of the 2022 LWCWSP Update

1. Water supply during 1-in-10-year drought conditions through 2045
2. Protect and enhance natural systems
3. Encourage water conservation measures
4. Promote compatibility with local government planning
5. Coordinate and integrate with other water resource initiatives

# 2022 LWC Water Supply Plan Organization

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Demand Estimates and Projections
- Chapter 3: Water Conservation
- Chapter 4: Resource Protection
- Chapter 5: Water Source Options
- Chapter 6: Water Resource Issues and Analyses
- Chapter 7: Water Resource Development Projects
- Chapter 8: Water Supply Development Projects
- Chapter 9: Future Direction

# Next Steps

- Continue coordination with utilities, agricultural operations, state agencies, and other stakeholders
- Distribute some individual chapters for stakeholder review
- Stay up-to-date with progress of local and regional projects
- Next stakeholder meeting: **May 2022**
  - Update on Comprehensive Everglades Restoration Plan
  - Water resource protection tools
  - Regional groundwater models
  - Saltwater intrusion monitoring
  - SFWMD resiliency initiative



# 2022 LWC Plan Update Schedule

*Stakeholder Meeting 1\**

Big Cypress Basin Board Meeting

Stakeholder Meeting 2\*

Post Draft Plan for public review & comment

Stakeholder Meeting 3\*

Governing Board Meeting

Public comment period ends

Big Cypress Basin Board Meeting

Governing Board Meeting

*March 15*

April 28

May

Late August

Early September

September 8

October 3

October 27

November 10 (Naples)

\* Stakeholder meetings planned to be virtual

# Need Water Supply Plan Information?

- Plan information can be found at [www.sfwmd.gov/lwcplan](http://www.sfwmd.gov/lwcplan)
- Workshop announcements sent via email
- **Bob Verrastro, Plan Manager**
  - [bverras@sfwmd.gov](mailto:bverras@sfwmd.gov)
- **Tom Colios, Section Leader**
  - [tcolios@sfwmd.gov](mailto:tcolios@sfwmd.gov)
- **Mark Elsner, Bureau Chief**
  - [melsner@sfwmd.gov](mailto:melsner@sfwmd.gov)





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